# e Iron

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A Review of the Hardware, Iron and Metal Trades.

ADVERTISEMENTS PAGE 17.

Published every Thursday Morning by David Williams, No. 83 Reade Street, New York. Entered at the Post Office, New York, as Second-Class Matter.

Vol. XXXV: No. 4.

New York, Thursday, January 22, 1885

\$4.50 a Year, Including Tostage. Single Copies, Ten Cents.

A few months since the London Engineer published an engraving, enlarged from a sketch made by Mr. James Nasmyth in 1830, of a locomotive engine on the Liverpool and Manchester Railway, believed by Mr. Nasmyth at the time to be the Rocket. It was pointed out at the time that if this were really the Rocket, the engine must at some really the Rocket, the engine must at some time subsequently have undergone considerable alterations, so that the Rocket in the South Kensington Museum could have next to nothing of the real engine which it pre-tends to be about it. The appearance of Mr. Nasmyth's sketch made a considerable Mr. Nasmyth's sketch made a considerable sensation, especially among old railway men, and many letters were received asserting that Mr. Nasmyth was mistaken, and that there never was in 1829 or 1830 more than one Rocket—namely, the famous engine which may be regarded as the progenitor of the modern locomotive. For some time the converte of Mr. Nasmyth's statement had

and the opening of the Liverpool and Man-chester Railway on the 15th of September— that is, a period of 11 months. All that was known until a comparatively recent period is that the engine went back to Stevenson's works and had some alterations made. But questions on this point have elicited considerable information which may be briefly summarized here. After the Rainhill competition

in many books that the rails were of cast iron. This is not the fact. They were of wrought iron, in part at least. Mr. Birkinshaw proposed rolling them in rolls made purposely to give the fish-belly, and such rails were rolled 18 feet long—a great triumph for those days. About the 23d of October, the celebrated Rainhill competition resulted in the award of the £500 prize to be mentioned in detail here.

Up to this point there is no difficulty; all about the Rocket is well known. But no writer has said what became of the Rocket in the interval between the Rainhill trials and the opening of the Liverpool and Mannchester Railway, and ran over Mr. Huskisson. Several correspondents, however, insist that there was but one Rocket on the railway, and Mr. Isaac Watt Boulton has supplied several very interesting extracts from his father's diary bearing on the early history of the locomotive, which seem to support this view. There is, however, only an apparent inconsistency; and there is little doubt that there were two Rockets for some time at work on the line; and it is even doubtful if the second Rocket had any name plate on at the time Mr. Nasmyth is ketched it. It nust be remembered that and the opening of the Liverpool and Manchester line in 1820, at the opening of the Liverpool and Manchester Railway, and ran over Mr. Huskisson. Several correspondents, however, to 1826, when he went back to Newcastle. This correspondent, writing over the signature, "An Old West-bridge Man," says in the letter referred to:

"Now, sir, I should just like to run over a bit of history, which, perhaps, may clear up this matter. You know that in the month of October, 1820, the first Rocket won the prize, and the line was not opened till September 15, 1830. Now, what were the Stephenson doing during that 11 months? Does any one think they were sitting still? No, indeed; both father and son were workevents trod on each other's heels during the first two years of the life of the locomotive

Locomotive.

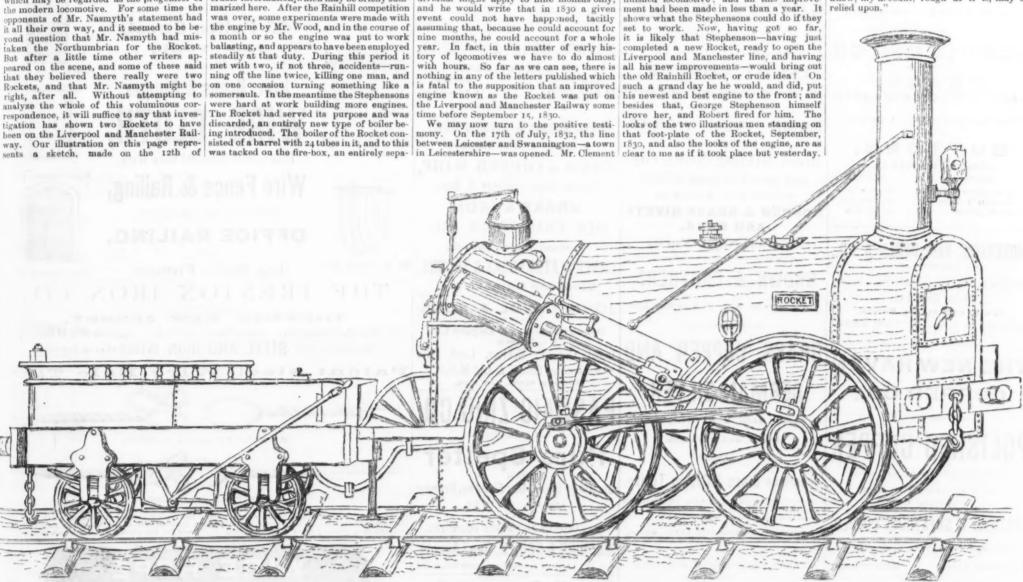
Locomotive.

Locomotive.

In many books that the rails were of cast iron. This is not the fact. They were of wrought iron, in part at least. Mr. Birkinshaw proposed rolling them in rolls made purposely to give the fish-belly, and such insist that there was but one Rocket on the purposely to give the fish-belly, and such insist that there was but one Rocket on the purposely to give the fish-belly, and such insist that there was but one Rocket on the purposely to give the fish-belly, and such insist that there was but one Rocket on the purposely to give the fish-belly, and such insist that there was but one Rocket on the proposed rolling them in rolls made purposely to give the fish-belly, and such insist that there was but one Rocket on the proposed rolling them in rolls made purposely to give the fish-belly, and such insist that there was but one Rocket on the proposed rolling them in rolls made purposely to give the fish-belly, and such insist that there was but one Rocket on the proposed rolling them in rolls made purposely to give the fish-belly, and such insist that there was but one Rocket on the proposed rolling them in rolls made purposely to give the fish-belly, and such insist that there was but one Rocket on the proposed rolling them in rolls made purposed to give the fish-belly and such insist that there was but one Rocket on the proposed rolling them in rolls made proposed rolling them

Does any one think they were sitting still? No, indeed; both father and son were working, as if for their very lives, to perfect the first two years of the life of the locomotive which immediately followed the Rainhill trials, and it was quite possible for a locomotive to work for two or three months on a line without the knowledge of every one concerned. Thus, the experience of an individual might apply to nine months only, and he would write that in 1830 a given event could not have happened, tacitly assuming that, because he could account for a whole year. In fact, in this matter of early history of Igcomotives we have to do almost with hours. So far as we can see, there is a life for their very lives, to perfect the locomotive. More real progress was made during that 11 months than in any one year before or since. Look at the old Rainhill Rocket, and at Mr. Nasmyth's 1830 Rocket. The one is a crude idea; the other is a finished locomotive; and all this improvement had been made in less than a year. It shows what the Stephenson could do if they set to work. Now, having got so far, it is likely that Stephenson—having just completed a new Rocket, ready to open the Liverpool and Manchester line, and having all his new improvements—would bring out year. In fact, in this matter of early history of locomotives we have to do almost with hours. So far as we can see, there is nothing in any of the letters published which is fatal to the work of the letters published which is fatal to the work of the letters published which is fatal to the work of the local published which is fatal to the work of the local published which is fatal to the work of the local published which is fatal to the work of the local published which is fatal to the work of the local published which is fatal to the work of the local published which is fatal to the work of the local published which is fatal to the work of the local published which is fatal to the work of the local published which is fatal to the work of the local published which is fatal to the work of the local published which is the work of the local published which is the local published which is the local published which is the work of the local published which is the such a grand day he he would, and did, put his newest and best engine to the front; and besides that, George Stephenson himself

be opened with three new engines-Phoenix, Samson and Goliah—but, as bad luck would have it, the boat with the Samson ran aground near Trent. Being thus short of an engine the Rocket was taken off ballasting and required for the opening trains. All Leicester knew that the Rocket was the bal-last engine, so John Ellis and Robert Stephenson said, 'Call her Comet,' which was no sooner said than done. The passengers all praised the new Comet, as they called it, little knowing that it was the Rocket which they had seen ballasting for about four months. In December, 1835, the Rocket, then under the name of Comet, went to the London and Birmingham line to be a ballast engine; the Phœnix soon went to help to make the Gloucester line, and the Samson went on the Ibstock branch; and in place of these we had the Vulcan and Atlas, two very fine six-wheeled coupled engines. I hope I have cleared up some of the difficulties, and, as I have only told you just what I saw and know, my account, rough as it is, may be



THE ROCKET, 1832.—FAC-SIMILE OF A SKETCH MADE BY MR. W. STENSON, MARCH 12, 1832.

March, 1832, of the second Rocket, after it had undergone important alterations. This is the engine drawn by Mr. Nasmyth, but with the cylinders raised and a second pair of driving-wheels added. It will be advisable here to recapitulate certain facts which it is desirable should not be forgotten. So far as can be learned, the first railway ever used apart from a mine was ailway ever used apart from a mine was railway ever used apart from a mine was the Surrey Railway, designed by Mr. Jessop, on which goods were hauled by horses be-tween Croydon and Wandsworth. The second was the Stockton and Darlington Railway, opened on the 29th of September, In the first year its receipts increased rom £700 to £1500 a month. Passengers carried on it at 1d. a mile outside and 1/2d. a mile inside. The price of coals, which used to be 15/ to 17/ a ton at Stockwas reduced at once to 10/2 by the way. As far back as 1822 the Liverpool and Manchester Railway was projected by Mr. William James.\* The surveys for it were made by Mr. Vignoles, but the opposition of the canal proprietors was so great that nothing was done until the financial ess of the Stockton and Darlington Rail-stimulated Liverpool and Manchester capitalists to renewed exertions. In the by George Stephenson, who had been appointed by the company to carry out Mr. James's scheme. In October, 1829, there remained to be completed only 4 miles of the road out of 33—that is to say, all the heavy ork was done; but not more than 14 miles permanent way were laid. The rails were the fish bellied type, which, it may not be generally known, was invented and patented by a Mr. Birkinshaw. It will be found stated

nal Rocket as the boiler of the latter was over that of the Royal George or the Loco-

Although Stephenson by no means wished to run the Rocket, a half-worn-out ballast engine, from Manchester to Liverpool, on the opening day, he did not wish that the name should be lost, and so a new Rocket was put on the road. There is a suggestive passage in Smiles' "Lives of the Engineers, George and Robert Stephenson," page 223 of the 1874 edition: "Eight locomotive engines constructed at the Stephenson Works had been delivered and placed upon the line, the whole of which had been tried and tested There is not in this passage a shadow of foundation for believing that the Rocket of 1829 took part in the proceedings of the day. On the same page, further down, Smiles records the particulars of Huskisson's death. Mr. Huskisson, " says Smiles, " had alighted from the carriage, and was standing on the opposite road, along which the Rocket was observed rapidly coming up. Here we have the only mention made of th Rocket by Smiles in connection with the opening. Indeed, search in contemporary records has entirely failed to do more than

\* These engines were the Rocket, the Northumbrian, the Arrow, the Phænix, the North Star, the Dart, the Comet and the Meteor.

testimony from a gentleman competent to ager wrote: 'Our engine Invicta is broken write with authority on the subject. But down; send men at once; we are having to we have even better evidence than this. On the 12th of March, 1832, Mr. W. Stenson, of Leicester, made a drawing of the Rocket ton for seven new engines at once. Only as she stood at the Fosse-lane siding, near those in the works at the time have any as she stood at the Fosse-lane siding, near Leicester. George and Robert Stephenson, S. S. Harris, John Eilis and his son, Edward Shipley and others were present. Mr. Stenson afterward made a tracing of the engine be named Phoenix, Samson, Goliath, to be Son if the Shipley and Shipl weeks before, with perfect success." This plainly implies that all the eight engines it to a gentleman who has sent it to us for works manager at Newcastle, a letter came bered, of the events of the 15th of Septembered, of after the engine ran on the Liverpool and saying, 'Get engines ready, as this line will Manchester Railway, and was there drawn be opened July 17; John Ellis says if en-Manchester Railway, and was there drawn by Mr. Nasmyth, it went back to Newcastle, the cylinders were raised, a large pair of trailing-wheels was put on and coupled, the safety-valve was put on the dome, a brake he could do for the Swannington Company put on the tender, a headlight on the chimney and the chimney was shortened. There is which had just been put in first-rate order, reason to believe that this engine was after-ward called the Comet. Further details of the history of this 1830 Rocket are supplied Rocket was sent by boat to the Leicester by a remarkable letter which appeared in the Ratilway Review of November 28, 1884.

We are not at liberty to give the name of the writer, but may say that he was on the Stockton and Darlington line in 1825, at Stockton and Darlington line in

'Our engine Invicta is broken idea what a bother it was to keep the lines

on July 17, 1832. I am not old enough to remember this, but I saw the fact in the old Swannington books, and it is generally known by men on the line."

This, says the Engineer, is very direct to Newcastle to be improved. Just now the men at the Newcastle Works were hard at it, almost from obscurity. The question what the so-night and day; yet they could not turn out engines fast enough for the demand. The This, says the Engineer, is very direct Canterbury and Whitstable Company's manits name-plate to the title. It is certainly a very curious fact, if it be a fact, that the old work with horses. The Liverpool and tender should have been preserved, if we Manchester sent for five and the Darlingthe engine has passed. The probability is that the engine has been rebuilt from the that the engine remains of several old engines-a bit from omotives, dating from about the year

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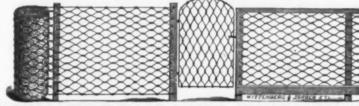


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Four months ago the Standard Steel Casting Company, of Thurlow, Pa. (2 miles south of Chester), started their 10-ton opeuhearth furnace. Since that time they have achieved a complete technical success. The principal difficulties heretofore encountered in the manufacture of steel castings have been "blow holes" and hard steel, the former making a casting honey-combed, while the latter difficulty renders it unfit as a substitute for forgings. The Standard Steel Casting Company have overcome these difficulties and are now making castings that are practically free from blow holes and that can be machined (without anand that can be machined (without an-nealing) as readily as iron forgings. There are few who realize the importance of the are few who realize the importance of the fact of the ability of the engineers of this country to produce soft-steel castings. From a defensive point of view it is enormous. The ordinance of the United States both for the army and navy is notoriously inadequate, when compared with that of foreign countries which possess the marvelous instruments of destruction manufactured by Krupp, Whitworth, Armstrong and others—guns canable of hurling balls and others—guns capable of hurling balls weighing 2000 pounds through solid plates of steel 2 feet thick. The United States Government having at last awakened to the necessity of having a navy, must now see the importance of having it properly equipped, and just as it was possible to make all the steel for these vessels in this country, just steel for these vessels in this country, just so possible is it to make all the guns and and ordnance in this country. Hence there is no longer any necessity for the Government to go abroad for material of this kind. There is still some difficulty experienced in making small, irregular-shaped castings, owing to the enormous shrinkage of cast steel, which is from two to three times that of iron. But this trouble with a little practice will soon be overcome, as the other and tice will soon be overcome, as the other and tice will soon be overcome, as the other and more serious difficulties have been in the past, and then steel castings will be used for all heavy parts of ordinary machines—cross-heads, cranks, connecting rods, screws, hydraulic cylinders, pinions, gearing-wheels, coupling-boxes, rolls, spindles, shafts, &c. The superiority in strength and dutility of cast steel over cast iron shafts, &c. The superiority in strength and ductility of cast steel over cast iron, and, therefore, the economy to be gained in weight, render it an important item to rail-road engineers. Cast-steel wheels are just as certain to supersede chilled-iron wheels as steel rails did iron rails. A cast steel wheel can be made that will have a life at least four times as great as a chilled-iron wheel and cost only about two-and-a-half times as much, the economy and safety being evident. The prospects are, there-fore, that in a few years there will be an extensive growth of the steel foundry busi-ness and the little 10 ton plant at Thurlow may in time equal its mighty rival in Germany, and become the Krupp of America.

### Railway Foreclosures in 1884.

Railway Foreclosures in 1884.

The record of railway foreclosure sales in the United States during 1884, says the Chicago Railway Age, shows that the harvest of bankruptey sown during the disastrous times commencing some 10 years ago has now been nearly gathered. We find that during the year the number of roads thus sold, their mileage and the amount of capital represented were all much less than in any previous year since 1876, when our record began, and that they were nearly all of little importance, only one having a mileage of over 71 miles. The total number of railways sold under foreclosure in 1884 was 18. Total miles, 710; bonded debt, \$9,591,000; capital stock, \$13,913,000; total stock and debt, \$23,504.000. In these figures the debt does not include accrued interest or floating indebtedness, which would very greatly increase the obligations. In a very greatly increase the obligations. In a few cases the amount of debt and capital stock has been partly estimated, where late figures had not been made public. It will be found that most of the roads in this list have Cranes and Slings.

"D. B. G." Special Crane Chain.

The stand of the roads in this list have been insolvent for some years, their final sale being simply the settlement of long existing trouble. The steady and rapid decrease in the number and amount of foreclosure sales during the past nine years is shown in the following recepitulation.

shown in the following recapitulation: ation: Capital stock and bonded debt. \$217,848,000 198,948,000 311,631,000 243,88,000 263,823,000 65,28,000 1,354 710

\$1,499,550,000 25,858 The encouragement, however, which is derived from the fact of the decrease in the number of foreclosures is offset by an examination of the record of receiverships dur-ing the past year. Here we find evidence that seed had been sowed for a new and luxuriant crop which will ere long begin to be harvested in the form of foreclosure sales. Our record of roads placed in the hands of receivers during the past 12 months shows 37 railways, having a mileage of 11,000 miles, with a bonded debt of \$107,000,000, not including other debts and past-due interest, and an apparent capital stock investment of over \$307,000,000, have failed and have been over \$307,000,000, have failed and have been taken possession of by the courts. To this list might be added the Mexican, Oriental, Interoceanic and International R ilroad Company (incorporated in this country with large capital stock) and the Newcastle Northern, and St. Louis and Western companies, which had expended much money in grading, although track had not yet been grading, although track had not yet been laid. These included would make the total number of companies placed in receivers' hands 40, according to our records, and would somewhat increase the capital and debt account above shown.

A series of experiments has been con-A series of experiments has been conducted at Spezzia, Italy, to ascertain the effects of torpedoes on a keel vessel of the type of the ironclad Italia. Her steel plates were displaced and bent, and the water entered her compartments, but she maintained her position. The result is regarded as showing that the effect of torpedoes is overrated, and that they are insufficient for the defense of ports.

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NAHUM STETSON, Jr., Agent, 73 Pearl Street, New York. iron trade the company made an assignment. the strike among the coal miners that oc-

The New Tariff Organization

In accordance with the call issued, some o gentlemen met at the Astor House 60 gentlemen met at the Astor House on Thursday, January 15, and organized the American Protective Tariff Association. Among those present were Henry S. Eckert, president of the Eastern Pig Iron Association; Henry Carey Baird, of Philadelphia; John Jarrett, of the American Tinned Plate Association, of Pittsburgh; Alfred Marshall, J. Wesley Pullman and William A. Ingham, all of Philadelphia; E. D. and E. A. Woodruff, of Auburn, N. Y.; Geors Danby, of the American Sheet Iron D. and E. A. Woodruff, of Auburp, N. Y.; George Danby, of the American Sheet Iron Company; Thomas W. Bethel, of Wilton, Conn.; P. S. Stetson, of the Leesport (Pa.) Iron Company; George Draper, of Milford, Mass.; Kenneth Robertson, of the Secaucus (N. J.) Iron Company; Oliver Williams, of Catasauqua, Pa.; Frank A. Flower, of Wisconsin; J. E. Thropp, of Philadelphia; Joseph D. Weeks, of Pittsburgh; John F. Quarles, secretary of the Eastern Iron Ore Association; William H. Ainey, of Pennsylvania; Thomas H. Moller, Henry T. Cook, W. J. Taylor and I. P. Pardee, of New Jersey; W. E. C. Coxe, of Reading; George W. Russell, of Massachusetts; Frederick Prime, Jr., of Philadelphia; De B. Randolph Keim, of Washington, and E. H. Ammidown, Le Grand B. ton, and E. H. Ammidown, Le Grand B. Cannon, A. R. Whitney, D. L. Einstein, George T. Mulford, E. P. Miller, W. M. Knight, Henry Merz, E. P. Williams, James M. Farr, E. M. Cook, Morris H. Budlong M. Farr, E. M. Cook, Morris H. Budiong and Chester Griswold, all of New York, and Thomas H. Dudley, of New Jersey.

The meeting was called to order by Mr. Ingham, and Mr. Eckert was made temporary chairman. Mr. Eckert briefly announced the object of the gathering. "Its

nounced the object of the gathering. "Its design," he said, "is to serve protection as a principle and in doing so to serve the labor interests of the country. We have no other purpose than that." Mr. Ingham stated that at a meeting of the Eastern Pig Iron Association, in November, the subject was broached of getting up a general tariff club combining all interests. A committee had then been appointed, of which he was chairman, and he had corresponded with leading men throughout the country and had reported to the next meeting that a general meeting should be called. The committee meeting should be called. The committee was directed to prepare the draft of a constitution, in which the new association to be formed was named "The American Tariff Club," and its object was declared to be "to promote the protection of American industry." He moved that a committee on permanent organization be appointed to name officers and present a plan of organization. The following committee was appointed: Messrs. Ingham, Flower, Russell, Thropp. Ammidown, Pardee, Cannon, Bud-Thropp, Ammidown, Pardee, Cannon, Budlong and Dudley.

The constitution as reported by this comnittee, after some slight changes, was adopted. It provides that the name shall be "The American Protective Tariff Association," and that its objects shall be to secure and maintain protection to American labor and American industries. The third article makes every person who favors the ob-jects of the association eligible to mem-bership in it. The officers provided for persnip in it. The officers provided for are a president, a first vice-president, and a vice-president for each of the States and Territories, a secretary, treasurer, and 100 directors who shall, as far as possible, represent the different industries of the country. The initiation fee was fixed at \$1, and the annual dues after the first year at \$1, and provision was made for the admission of affiliated organizations consisting of 20 members or less upon the payment

The Committee on Permanent Organiza tion were prepared to present names for the various positions, but it was deemed best, in view of the necessity that the wisest choice be made, to postpone action for one month, and in the meantime the committee were instructed to select a list to be presented at a meeting to be held Thursday, February 12, 1884. Prior to adjournment Mr. Sharp moved that the association express its disapproval of the importation into this country of foreign pauper labor. This was carried by a unanimous vote.

The Manchester Works to be Sold.

A writ of scire facias has been issued from the United States Circuit Court at the appli-cation of Knox & Reed, attorneys for Thomas Hillhouse, president of the Metro-politan Trust Company, of New York, trus-tee, on a mortgage executed by the Mantee, on a mortgage executed by the Man-chester Iron and Steel Company, of Pitts-burgh, says the Pittsburgh Dispatch. The mortgage was executed July I, 1882, to secure bonds that were issued for the payment of a debt of \$280,000, and provided that the debt should be paid in 30 years, with interest payable semi-annually. In case of default in the payment of any in-stallment of interest on any of the bonds, or of any coupon, the entire principal was to become due. Mr. Hillhouse's petition alleges that there has been a default, and that hold-ers of not less than one-fourth of the amount of bonds outstanding have requested him to

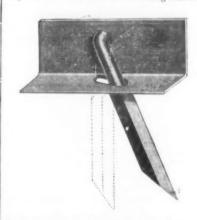
of bonds outstanding have requested mix senforce their rights under the mortgage.

This is the end of the struggle of the Manchester Iron and Steel Company to keep its head above water The company was composed of Pittsburgh and New York men, composed of Pittsburgh and New York men, and a few years ago the extensive works in Manchester were leased to A. Kloman, but noney was made out of it, and then the Pittsburgh members of the company endeavored to effect a long lease, which was practically a sale of the works and property manchester were leased to A. Rioman, due no more was made out of it, and then the Pittsburgh members of the company endeavored to effect a long lease, which was practically a sale of the works and property. The New York parties interfered by equity proceedings in the United States Court here and the lease was prevented by injunction. The Pittsburgh members of the company were ousted, and the New Yorkers proceeded to borrow money and extend the works by the erection of a valuable and costly plant, hoping by infusing new life and energy into the business that it could be made to pay. To secure the borrowed money, amounting to about \$300,000, this mortgage was executed and bonds placed in the hands of creditors. The effort proved futile, and on account of the dullness in the iron trade the company made an assignment.

ran the busine s and worked up all material and paid off three-fourths of the floating debt, but in the meantime the bondholders were getting nothing, and now, after the expensive plant had been idle for a long time, there being no attempt at resumption, they clamor for their money and have taken this step to procure a sale of the valuable property in the lower end of Allegheny upon which the mortgage that secures their bonds was placed. onds was placed.

Buford's Steel Smoothing Harrow.

The Rock Island Plow Company, of Rock Island, Ill., make a harrow known as Buford's steel smoothing harrow, the arrangement of the teeth of which is shown in the accompanying cut. The frame of this herrory is really a related to the companying cut. in the accompanying cut. The frame of this harrow is made of angle steel, supported by rods passing through cast-iron spools. By referring to the illustration it is seen that the teeth work in oblique slots, which are punched in the flange of the bars, so that by reversing the harrow it may be used either as a smoothing harrow



Tooth of Buford's Steel Smoothing Harrow,

or as a straight-tooth harrow. The harrows are made in sizes of 48, 60 and 72 teeth, the first two sizes being in two sections and the last in three sections. Instead of their diamond sloping-cut tooth, which is here shown, the Rock Island Plow Com-pany furnish round steel teeth when desired, but recommend the diamond teeth as being more effective. These harrows will work in any kind of ground, and are claimed to be very simple, strong and durable.

The Bailey Drill.

The Illinois Iron and Bolt Company, of Carpentersville, Ill., are now putting on the market what is known as the Bailey drill, shown in the annexed cut. The entire spin-dle and feed-screw are made of steel, and the self-feed may be used or not, as desired, by simply dropping or raising the feed dog. It can also be easily changed to a slow or fast feed. The table can be fastened at any desired point by an improved cam. Through



The Bailey Drill.

an intermediate gear the balance-wheel may easily be disconnected, and by changing the crank from one shaft to another different speeds may be obtained. All parts of these drills are made interchangeable, and every drill is set in perfect line and tested before shipping.

Paris, 1878



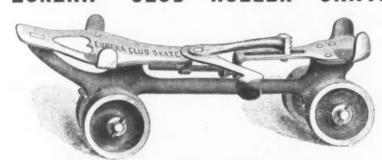
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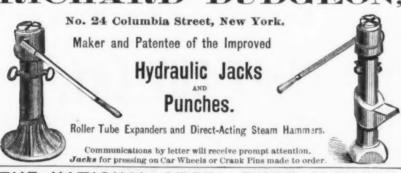
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### Yellow Postal Notes Superseded.

The old yellow postal notes will soon be a thing of the past. They have been a source of great annoyance and trouble. The paper on which they were printed was not safety paper, but a sort of water-proof material, from which castile soap and water would remove the writing ink. This permitted shrewd counterfeiters to "raise" them, which was done to some extent in the West. The discovery of several cases created much excitecovery of several cases created much excitement last month, probably more than the fars warranted. Since May last the new notes, printed on lilac paper, have been in use by the order of the Postmaster-General at all the principal offices, and no more of the old yellow ones were put out. There have remained, however, about 2000 offices which were using the old yellow notes originally furnished them. The Homer Lee Bank Note Company, of this city, has the contract for issuing the new lilac notes. Mr. Lee says he has received an order from the desays he has received an order from the de-partment to hasten the work, so as to furnish supplies to all offices not now equipped with the new notes. The postmasters at the several offices are to be instructed to return at nce to the Post Office Department all yellow notes on hand, and no more will be issued anywhere. The company has been turning out the new lilac notes at the rate of about 2,000,000 per month. Up to January between 15,000,000 and 16,000,000 had lary between 15,000,000 and 16,000,000 had been supplied to the Government. The new order will require an increase of about 40 per cent. in the monthly supply. The notes are printed in sheets, cut up and bound with wire in books or pads of 500 each. The company is required to keep on hand a supply for each money-order post office in the country, and is responsible for every note issued. The notes are sent by registered mail directly from the works to the post offices, on requisitions from the Post Office Department, the postmaster's receipts being the company's vouchers. The notes, in the process of manufacture, are handled by 35 persons, counted nearly 40 times, and each time subjected to examination and checks.

### Large German Lead Works.

From a recent number of London Engineer ing we gather the following particulars of the works of the Mechernich Lead Com-pany, situated at Mechernich, in the Eifel district, Germany. These works, which are one of the most extensive mining and smelting establishments in Europe, turn out yearly over 25,000 tons of refined lead, being very much more than is produced by any other single works. But it is not the large amount of metal turned out which gives interest to these works; it is the very low-grade material from which the lead is obtained, and the great bulk of rock which has to be handled in order to reach the above produce. This rock is a soft sandstone, in which is disseminated galena in fine grains and crystals. There are a few nodules of ore of larger size, and besides the galena there occur also small quantities of carbonate and molybdate of lead; but these are quite insignificant by comparison, practically the whole of the metal occurring as galena finely sprinkled through the light yellowish sandstone. The great amount of this sandstone that has to be worked may be judged from the fact that the usual average assay of the rock, as it goes to the dressing works does not exceed 3 per cent. of lead. Latterly, owing to the very low price of lead, it is understood that some of the lowest grade parts of the workings are being left, so that the average of the stone raised may assay a ittle higher, but with anything like a normal lead price 2½ to 3 per cent. stone is worked. The property of the company extends for some 2 miles or so along a low ridge, which forms the outcrop of the lead-bearing sandstone, which dies toward the north. ne, which dips toward the north.

The working is carried on partly by quarry-ing and partly by mining, there being two main points of operations some distance apart, main points of operations some distance apart, with a quarry and a mine at each point, the rock being got by open workings as far as the dip will allow, and then followed by mining. The quarries are on an enormous scale, working on many terraces with lines of tramway at several different levels. The blasting is carried on by means of electric label form from a central station, and reshot firing from a central station, and re-cently electric lighting has been successfully introduced for night working. A layer of introduced for night working. A layer of red sandstone several yards in thickness has to be removed before coming to the leadbearing yellow sandstone, and huge waste heaps are being pushed out into the surrounding country from the several dumping points to where this red sandstone is taken. The yellow sandstone, as quarried, is hauled away to the mouth of the neighboring mine, right over which are erected the dressing works in a building many stories high, each works in a building many stories high, each works in a building many stories high, each story smaller in area than the one below it, till the final one is just large enough for the ascending trucks of ore to be emptied out above the stone breakers, through which it is at once passed. The ore from the quarry and that from the mine are raised to this top story and then pass down through a series of crushers, classifying cylinders, revolving sorting taclassifying cylinders, revolving sorting ta-bles, &c., being deprived during the passage of a large amount of pebbles of all sizes, which contain no lead, and of pieces of worthless sandstone. The whole is finally reduced to powder and subjected to hydraulic dressing and concentration.

The mechanical arrangements are very per-

fect, the great mass of material passing down through the several stories, and from one stage of the process to another, with a minimum of manual labor. The final result of this dressing of the ore is, that a portion of it is concentrated to 60 per cent. of lead, and goes direct to the smelting works, while another portion reaches only about 20 per cent. of lead, and is taken away to another central dressing works, at which, together with a similar product from the other quarry and mine, it is further treated, and eventually also concentrated to 6c per cent. lead and sent to the smelting works. The ore, as delivered to the smelting works, is very eral superintendent of the American and pure indeed, and the working of it is very simple. It is calcined and agglomerated in will start to-morrow to begin the work at large "double-decked" furnaces, and is then smelted down in blast furnaces, with limestone and iron ore as fluxes, yielding a very and in the start to-morrow to begin the work at Topolobampo. A large construction outfit is already on the way from El Paso and Mr. Campbell will meet it at Topolobampo.

soft lead, containing a little over 7 ounces of silver per ton. The lead is desilver-ized by the zinc process. The com-pany employ over 4000 workmen, and have in use 25 full-sized locome. have in use 25 full-sized locomotives on 12 miles of railway. They have erected large stores for supplying necessaries to the men; also flour mills, bakehouses, and a large brewery, everything being sold at cost price to employees of the works. In spite of the "bad times," which have fallen, perhaps, more severely on the lead trade than on any other metallurgical industry, this company continues to pay a large divi-dend on its capital. There are some other works in the district operating on the same class of material, but they are comparatively small and unimportant. Water is scarce and has to be economized. At the large dressing works above described, elaborate arrangements are made for using it over and over again. The final residue of sand from the crushed sandstone is pumped out with the water from the last stage of the dressing process into settling tanks outside the buildings. The water, after clearing, is used again, and the sand hauled on to large waste heaps.

### Improved Tool Cutter for Pipes and Tubes.

The accompanying engraving represents the improved form in which Messrs. D. Saunders' Sons, of Yonkers, N. Y., are at



Tool Cutter for Pipes ders' Sons, Yonkers,

of special interest. The loose or sliding block, which is a characteristic of the old tool, has been replaced in the present form by a swinging block, clearly shown in the engraving. By this swinging block the tool is rendered more serviceable and more convenient than before. The general features of advantage which this tool possesses may be briefly summarized. The manufacturers direct attention to its simplicity, great strength, lightness and the fa-cility with which it can be adapted to the va-rious sizes of pipe. It is adapted to different kinds of work, and is found to operate equally well on solid iron or on thin brass or copper tubes. It is provided with two handles—one to operate the tool, and the other the central sliding roller. The stock is open on the side to admit the pipe, and is provided with fric-tion rollers which en-Improved Form of circle the pipe. By Tool Cutter for Pipes instead of a sliding and Tubes, Manumotion is secured, factured by D. Saunwhich greatly lessens the friction on the pipe. The tool in its

action is similar to that

made which makes it

of a lathe tool. It cuts chips out, and leaves the end of the pipe chips out, and leaves the end of the pape square and true and ready for the die. The slide or swinging block and rollers are so arranged that they cannot drop out or be mislaid. The cutter is so adjusted that it can be easily removed and reground. All the surface rollers, pins, cut-ters, &c., are made of the best steel, hardened, thus increasing the durability and lessening the friction to the smallest possible

### Canadian Iron-Ore Districts.

Mr. W. Hamilton Merritt summarizes the general iron-ore districts of Canada and their geological position, as follows: Rocky Mountain District.—In three local-

ities in the Palæozoic and two in the Ter tiary.

Great Plain .- In one locality each in the Tertiary and the Cretaceous.

Lake Superior District.—In one locality in

the Laurentian; in one at the junction of the Laurentian and Nipigon; in one at the junction of the Huronian and the Nipigon; and one in the Devonian. Lake Ontario and St. Lawrence District .-

In four localities in the Silurian and six in the Laurentian. Eastern Townships .- In a number of local

ities in the Silurian.

Newfoundland.—In one locality in the Lower Silurian and one in the Carboniferous.

Maritime Provinces —In four localities in six in the Upper Silurian; one at the junction of the Upper Silurian and Carboniferous; one in the Lower Carboniferous; and two in the Devonian. The ores consist of magnetite, hematite, ironstone, limonite ar d specular ore. The amount mined in 1883 was about 97,000 tons, of which 44,635 tons were exported.

Railway Progress in Mexico.—The American and Mexican Pacific Railroad Company have closed a contract for the construction and equipment of the first section of their road, beginning at the harbor of Topolobampo, on the Gulf of California. James Campbell, who has been superin-

PAT.DEC. 26,1871.

A.C.COES

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is the day John Wilson, of Sheffield, England, which consists of four peppercorns and liamond, under the mistaken belief that I had the right to do so.

NOW, This, is to Witness, that, in consideration of the forbearance of the presentatives of the said John Wilson to suo me for damages for the wrong resaid, I do hereby undertake and agree,

FIRST, to surrender and deliver to the Attorneys for the said John Wilson, all knives now on hand, and in my possession, or under my control, bearing the said imitation trade-mark, and

SECOND, I further undertake and agree to and with the said John Wilson, and his legal representatives, not to manufacture or sell, or cause to be manufactured or sold, at any time in the future, Knives or other Cutlery, bearing his trade-mark aforesaid or any imitation or simula-Cutlery, bearing his trade-mark aforesaid or any imitation or simulation thereof. IN WITNESS WHEREOF I have hereunto set my hand and seal at West Mansfield, aforesaid, this thirty-first day of May, 1883.

WITNESS:

E. M. REED."
(Attorney for Defendant.)

G. A. ROBINSON, (L.S. dant.)
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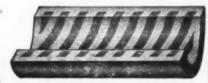
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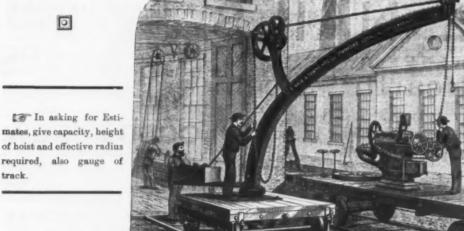
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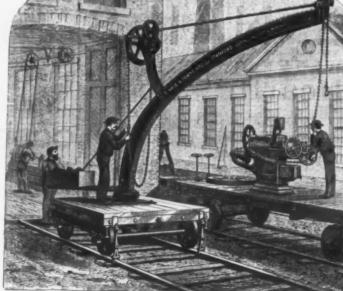


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### Reissnes of Patents.

The subjoined dissenting opinion of Mr Justice Miller in the recent case of Mahn va Harwood and others, on appeal from the Circuit Court of the United States for the District of Massachusetts, will be read with interest as furnishing the first public intimation that the United States Supreme Court is not unanimous in holding the concerning reissued patents which were enunciated in the decision of January 9, 1883 in the case of Miller vs. the Bridgeport Brass Company, a decision which wiped out of existence great amounts of capital in vested in reissued patents upon faith in the doctrine, previously held by the Supreme Court, that a patentee was entitled, in a reissue, to claims coextensive with his invention. Mr. Justice Miller said:

In this case I avail myself of the first occa sion which has fairly required it to give ex-pression to my views in opposition to those expressed by the court in several cases in which reissues of patents have been held invalid.

The principle on which the present case is decided, and which, if not the only ground of that decision, is emphasized in the opinion as the controlling ground, is that of laches in the application for the reissue. It is quite clear from the opinion that, if in all other respects the patentee had been entitled to the reissue of the patent on which he relies in this case, it would give him no protection, because this court is of opinion that, under the circumstances, the application for it came too late.

This proposition of the court does not grow out of any statute of limitation governing such application, nor because the original patent, and, of course, the reissue, does not have a considerable time to run before it expires by law, but because the court, applying to the transaction as it came before the commissioner of patents, the equitable doctrine of laches—of improper delay—holds that, on that principle, the party came too late and the reissue is invalid. The dis-tinction between the instrument being void and merely voidable is so well known that it can hardly be supposed to have escaped the attention of the court, and, since the judg-ment in this case can bind no one but the parties to it, the patentee in another suit on the same patent against another party, by showing reasonable excuse for his delay, may prove his patent to be valid, and in that suit he must recover, though he fails in this.

Thus every infringer will have the right to retry, when he is sued, the question of whether the commissioner of patents exercised a sound discretion in allowing the sur-render and reissue of the patent. Such a doctrine renders the labors of the Patent Office, with its commissioner and corps of trained examiners, of very little value, and subjects the final decision in favor of a patentee to the re-examination of any number of juries on the very facts which were passed upon by the officers appointed by law for the purpose of deciding the questions necessary to the validity of the patent. The doctrine is well established that a grant by the Government, within its lawful authority, evidenced by a patent under its seal and the signature of the Executive, cannot be impeached collaterally. It must be recognized as valid in all courts when it is introduced as evidence of the right which it confers, and can only be avoided by a direct proceeding by way of scire facias, or bill in chancery, to set aside the grant for some of the reasons which made its original issue a wrongful act. In such case the Government which issued the patent, by its attorney-general or other proper officer, in a court of competent jurisdiction, obtains a decree setting the patent aside, whereby it is rendered of no avail against all persons interested in the matter, as well as the

For decisions which establish this doctrine, if there could be any doubt about it, I refer to the following cases: United States vs. Stone, 2 Wall., 525; Same vs. Throckmorton, 98 U. S. R., 70; Mowry vs. Whitney, 14 Wall., 434, which is the case of a patent for invention and where the whole subject is fully discussed.

Undoubtedly there are cases of patents, at all or it did not exist in the officers or the same patent, each jury deciding on its tribunal which issued the patent. In such cases the court can see, from the face of the question of the validity of the reissue can instrument, the nature of the grant and the power which the law confers on the officer power which the law confers on the officer who issued it, that it is wholly void, and valid. Such an instrument is void ab initio, is void always and everywhere for want of power in those who made it.

Can the present case come under this exception !

Clearly not. The question of laches, of un due delay in making application to correct "a mistake, accident or inadvertence," by reason of which the patentee does not get the full benefit of his invention, must depend on many circumstances which cannot appear on the face of the reissued patent. No mistake can be corrected until it is discovered. The period of this discovery is always a matter of proof, which may be of the most varied character. If the discovery of the mistake was soon after the issue of the patent, and the delay defeated the right to the reissue, this was a matter into which the Patent Office should inquire. The duty to do so devolved on it, and the right to deto do so devolved on it, and the right to decide it necessarily followed. While the dates of the original patent and of the application of a reissue might seem to show an unreasonable delay, this appearance might have been removed by evidence which afforded a full justification for it. Very long delays have been justified by the decisions of this court when set up as objections to patents. See

1920 of the Revised Statutes, which was originally enacted in 1836, sets forth five distinct defenses which may be pleaded to an action for infringement of a patent right. They are as follow

That, for the purpose of deceiving the "I. That, for the purpose of deceiving the public, the description and specification filed by the patentee in the Patent Office was made to contain less than the whole truth relative to his invention or discovery, or ore than is necessary to produce the desired

2. That he had surreptitiously or unjustly obtained the patent for that which was in fact invented by another, who was using rea-sonable diligence in adapting or perfecting the same : or

That it had been patented or described in some printed publication prior to his supposed invention or discovery thereof;

or, ... 4. That he was not the original and first inventor or discoverer of any material and substantial part of the thing patented; or, "5. That it had been in public use or on sale in this country for more than two years

before his application for a patent, or had been abandoned to the public." The statute also requires the defendant in such cases to give the patentee notice with great particularity of the persons who are prior inventors or have knowledge of prior use of the invention, and when and by whom

t has been used. It will be observed that, while these de-

fenses go to the validity of the patent, they all resolve themselves into want of novelty or of priority of invention or discovery, exept the first and the last. Neither laches nor fraud is here men-

tioned as a defense to the patent. Why were these five points made matter of defense by statute! And why were no others mentioned? The answers to these two questions are obvious, and they are con-

clusive of the question before us.

The answer to the first question is that these defenses go to impeach the patent and destroy its value as evidence in that case, and by the law as it stood then and stands now this cannot be done without a special statute to authorize it.

And the reason why no other grounds for npeaching the patent were allowed to be at up in defense was that Congress intended that all other causes for impeaching the patent should be prosecuted in the usual mode of scire facias, or bill in chancery, brought by the proper law officers of the Government to set it aside and annul it.

If Congress had intended that the patent issued with all the necessary formalities should be assailed collaterally for every reason that might have been urged against its issue originally, it would have said so in short terms, and not have enumerated par-ticular or special reasons for which it may

be so attacked.

That laches is not one of these reasons is clear, and affords an unanswerable argument that it was not intended that it should be a ground of defense for its infringement in such actions.

The careful and studied enumeration of

matters going to impeach the patent, where a suit is brought to enforce rights granted by it, is the strongest affirmation that no others are admissible for that purpose in that kind of suit.

In the United States vs. Throckmorton the court said that, "in so important a matter as impeaching the grants of the Government under its seal, its highest law officer should be consulted, and should give the support of

his name and authority to the suit."

In Mowry vs. Whitney, 14 Wall., 441, it is said that a suit by an individual could only be conclusive in result as between the parties, and would leave the instrument valid as to all others, and the patentee might be subjected to innumerable vexatious suits to set aside his patent. "It would seriously impair the value of the title which the Government grants, after regular proceedings be ernment grants, after regular proceedings be-fore officers appointed for the purpose, if the validity of the instrument by which the grant is made can be impeached by any one whose interests may be affected by it, and would tend to discredit the authority of Government in such matters."

If the principles of the opinion in the pres-

with all the solemn formalities attesting their validity, which are properly rejected by the courts when offered in evidence, because they show upon their face that no authority existed for their issue. The power to grant the rights which they profess to confer did not exist. Either it did not exist in the officers or the same patent, each jury deciding on its worthless

Such a departure from the settled rules of that no evidence to be now produced or which could have been produced before that officer could authorize the grant or make it not be justified in a court until authorized by legislative power.

In several eases which have preceded this one, especially Miller vs. the Brass Company, 104 U.S. R., 350, where this doctrine has been stated in the opinion, other grounds were also given as the foundation of the judgment, I had hoped, when we came to a case where the question must be decided, my brethren would not adopt it on full consideration. This must be my apology for any apparent acquiescence in it heretofore. I am of opinion that reissued patents are entitled to the same consideration as other patents issued by the Government.

The grain carrying trade of the port of New York has been almost wholly lost to the American flag. No longer ago than 1879 we had in the trade 1798 sailing vessels, or nearly two to one compared with the number of steamers, but in the year 1884 only two of the entire fleet remained.

when set up as objections to patents. See Smith vs. Goodyear Dental Vulcanite Company, 93 U. S. R. 486.

That patents for inventions were intended by Congress to have this conclusive and unimpeachable character is manifest from the legislation on this very point. Section

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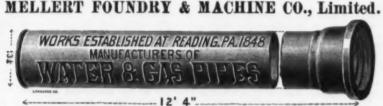
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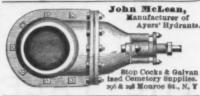
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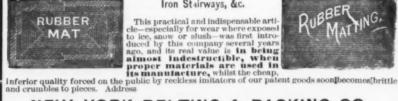
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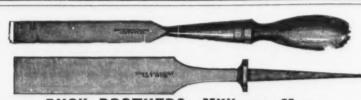


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Metal Railway Sleepers.

In view of the increased attention which metal railway sleepers have of late attracted, it may be of interest to state that they were first thought of in France by M. Vautherin, but soon subsided into oblivion. In Germany, on the contrary, the idea has been followed up since 1867, when, in the wake of the second Paris International Exhibition, the Bergisch Märkische Railway Company had 664 iron sleepers laid down between the stations of Schlabusch and Mulheimam-Rhein. These sleepers were 7 feet 2 inches long, weighed 5 cwt. 8 pounds, and were laid at a distance of 2 feet from one an-

Vautherin's sleeper was soon given up, ecause it was found that the joint between the rail and the sleeper was not tight enough and, consequently, the railway gauge would undergo an undue expansion. experiment was taken up again in the Ruhr Valley, on the metals of the same company, between the stations of Schwerte and Wikede. As many as 25,000 rather thicker sleepers were laid down in the central part, steepers were laid down in the central part, so as to improve the joint between rail and sleeper. This plant has now been laid for well-nigh 10 years, and yet most of the original sleepers are still in their places. It is true that similar defects, though in a lesser degree than in the case previously mentioned, showed themselves in this instance. There were district the lesser degree that the lesser degree degree that the lesser degree degree that the lesser degree degree degree that the lesser degree degr this instance. There were slits in the sleep-ers and defects in the joints; nevertheless, it may be said that the experiments, on the , proved successful.

handsome thing in recognizing the impor-tance of our agricultural interests in his annual review. But a due appreciation of the co-ordinate value of other interests should be rubbed into the minds of the grangers and of their pretended friends who have tried to belittle our manufacturing industries by assuming that prosperity always

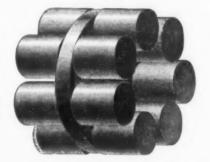
comes with abundant crops.

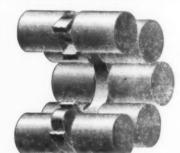
Nine-tenths of the agricultural products of the United States are consumed in our own country, and when the mills are running light and wages low, the farmers have an appreciable hint of the fact. The world's prices of corn and wheat and provisions are prices of corn and wheat and provisions are not made in England but in Chicago. Let the granger newspapers be careful in the future, then, in talking about our abundant harvests as though they were panaceas for all ills. The condition of our manufacturing interests is as important a consideration.

### Anti-Friction Journal Bearings

The anti-friction journal bearing shown in the accompanying engravings combines some valuable improvements for overcoming fricvaluable improvements for overcoming friction. It has been put to severe test in the past three years, and in every case, we understand, has given entire satisfaction. The construction of these bearing is practically the same in all its applications, and needs little description, as will be seen by reference to the illustrations. The journal is surrounded by a series of cylindrical rollers, nearly as long as the bearing in which they are placed. At the centers of their lengths the rollers are reduced in size, formwhose, proved successful.

In 1877 a new and stronger form of metal lengths the rollers are reduced in size, formsleeper was introduced, and a piece of T-iron ing necks, the object of which is to retain a
was riveted underneath, at the joint where proper position another series of anti-fric-





Anti-Friction Journal Bearings, - Figs. 1. and 2. - Perspective Views.

the rail is laid down, for the purpose of preventing the sleeper from being flattened.

This method proved a failure, and had to be given up. A piece of angle iron was then riveted against the upper flange, corresponding exactly to the hollow at the point where the rail rests on the sleeper. In order to keep the ballast in its proper place, to keep it perfectly tight and prevent all derangements in the metals while the trains pass over them, it became necessary to do away over them, it became necessary to do away with the two flanges and substitute two ver-

tical plates for them.

In Germany the use of soft steel has chiefly contributed to the use of metallic sleepers. This kind of steel possesses a great power of resistance and a greater faculty of overcoming the strains to which sleepers are exposed.
Of late years the basic system of steel-making has enabled manufacturers to supply large quantities of this metal at very cheap rates. Sufficient time has now elapsed to admit of judging the merits and demerits of the new description of plant. Herr Jungbecker, permanent-way engineer of the Bergisch Märkische Railway, remarks that metallic sleepers must not be of complicated section and must be easy to mill. It ought to be easy to finish them right away, without any costly process, just as they come out of any costly process, just as they come out of the rolling mill.

The actual cost of metal sleepers cannot be much in excess of the expense incurred in placing rails on wooden sleepers. Although the original outlay required for the former is much greater, it is soon made up for by their greater durability. It must not be for-gotten that the cost of the laying and relaying of wooden sleepers represents in the main-tenance of railways an item almost equal to the original outlay for the sleepers themselves, even without taking into account the inconvenience of having to break up the line every now and then. Supposing an old steel sleeper to cost five times as much as an old wooden one, and a new steel sleeper to cost double, there would yet be a clear gain of 25 per cent. in laying down a purely metallic

Harvests are Not Panaceas for All Ills.

The Boston Commercial Bulletin contains the following excellent article on the relations of agriculture and manufactures:
In the excellent review of the iron trade
for 1884 by Secretary James M. Swank, of

for 1884 by Secretary James M. Swank, of the American Iron and Steel Association, he says: "The country at large cannot be prosperous if the farmers are not." Without dissenting from that position, we should say the occurrences of 1884 pointed still more emphatically to the conclusion that the farmers cannot be prosperous if the country at large is not. An old farmer up in one of the hill towns of Hampshire County took the writer down into his cellar and showed him bins upon bins heaped with golden apples, the products of his orchard. Upon being congratulated upon his abundant crop, he replied: "Yes, I've got apples enough, but what I want is a market for them." The same reply could be aptly made just now by the farmers of the West.

The corn crop of 1884 consisted of 1,800,

which are placed both inside and outside of the roller necks, in order to retain all the parts in proper position around the shaft, are supported entirely on the separator rolls, and do not come in contact either with the axle the necks of the rollers or the inside of the hub, but only on the separating rolls. Where the bearings cannot be put on the shaft from the end, the retaining bands are hinged. It will thus be seen that four independent roll-

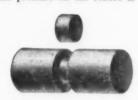


Fig. 3.—Bearing and Separator Rolls,

directly toward the center of the shaft or axle; consequently, the weight of the load does not tend to crowd the rollers together, and the separate rolls and bands are not

The manufacturers claim that there is a great saving of power in using these bearings; that they will run without oil at a high rate of speed, and that their desirability has been tested on the heaviest work. The rolls can be made from 18 inch in diameter up to the largest size, and, in any place where steel will not answer, hard brass may

The bearings are turned out by the Chaplin Manufacturing Company, of Hartford.

the farmers of the West.

The corn crop of 1884 consisted of 1,800,000,000 bushels, and was never before equaled; the wheat harvest was an abundant one, thus far estimated at 500,000,000 blaes, an amount which has but once before been equaled. The harvests of the United States in 1884 were very large, and yet a great amount of business depression existed, and manufacturers, mill operatives and all others who are engaged in our great mechanic arts and industries will be somewhat excusable if they make frequent and pointed mention of these facts.

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# The Iron Age

### Metallurgical Review.

New York, Thursday, January 22, 1885.

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Our attention has very frequently been called to the reprehensible practices of many traveling salesmen in "slashing" prices. It gineers have issued a circular which referemay be necessary in times of depressed to a very important question. The manageone of business ward tendency of prices at such a time is apparently inevitable, and the article or material which is maintained at a disproportionate cost will either be very sparingly called for or else a substitute will be brough into requisition at a lower value. A gradual settling of prices is consequently so natural that all attempts to prevent it are futile. This has been very plainly shown in the course of the pig-iron trade. Ever since the depression in business set in, pig-iron manufacturers have had their trade well in hand, restricting production voluntarily whenever necessary, and preventing accumulation of stocks, in the hope of being able to maintain prices, but all to no purpose, as rates have steadily declined, in accord with prevailing conditions. It is also true in the case of coal, which is being sold at much lower rates than a year ago, notwithstand. ing the persistent efforts of the mining companies to restrict production and to control prices. But while the natural tendency of allows the funds of the department to be States during the year 1884, compared with values is thus recognized to be downward diverted from their legitimate purpose, and during a period of depression, the fact re- the Patent Office building to become ac mains that traveling salesmen are in too crowded as to most seriously interfere with many cases accelerating the decline. They the proper course of business. An excellent not only cut prices, but very frequently slash" them unmercifully.

turers and jobbers was drawn to the reckless may command the best talent, for if manner in which orders are frequently being the chief executive of the department be taken. Profits are now at a minimum, and of superior ability, many of the lesser dif-

believe this to be the case when we hear at what rates some sales have recently been made. We do not now refer to financial sales, negotiated for the purpose of securing immediate pecuniary relief, but to sales made in a regular way by salesmen representing houses against whose standing not a shadow of suspicion has ever been cast. It seems absurd to call such a method of selling making concessions." As usually under stood, concessions cover a slight discount or a small reduction in price, or perhaps the payment of freight to a point near the location of the buyer. But some transactions which have recently come to light surpass anything in the way of concessions that we have been accustomed to meet. For instance, pig iron has been sold at points in New England by some parties at \$2 a ton less than was asked for competing brands. Even if the iron offered were a totally new brand, never before seen in that locality, and great difficulty was experienced in getting consumers to try it, this "slashing prices was most extraordinary, and, in the estimation of prominent merchants, reflects severely on the business sagacity of those who effected the sales. Now, were the salesmen who established these rates authorized to sell so low? Previous prices ruling in that locality evidently tempted the manufacturers of the new brands to make an effort to secure part of the market. It is not likely that they expected to be obliged to take \$2

Various occurrences of similar character are reported to us as happening in the man-Bars, plates and ufactured-iron trade. sheets have fallen under the influence of the slasher" at various points. Even the steel trade is not free from the evil results of con ferring unlimited powers upon traveling salesmen. Possibly instances of greater recklessness in making prices can be given for the steel trade than the iron trade. One that has just come under our observation is a case in which a salesman of American steel entered the lists against an English competitor for some trade which had up to that time been in the exclusive enjoyment of foreign steel makers. The price paid for the foreign steel was 20 cents per pound. Did the American salesman capture this trade by offering his steel, for, say, 15 cents? That would have been quite a reduction to the consumer, and it is a reasonable presumption that it should have been sufficient to secure the order. But the enterprising salesman was evidently determined to obtain this particular trade beyond a peradventure, and he made his price 7 cents per pound! Practical steel-makers and merchants see an inevitable loss in this transaction if the steel furnished is of equal quality with the foreign 20-cent steel, and they see further trouble in the demoralization of prices in this and other lines by the establishment of such an exceptionally low price for a high grade.

below the quotations of their competitors.

Members of the iron and steel trades, and by no means old members, have a vivid recollection of a large steel establishment which once was distinguished for its reckless salesmen. They evidently possessed unlimited power over prices, and they circulated freely among steel consumers, slashing" in every direction. Their sales were large, and the steel works continually expanded to meet the demand upon its capacity, and for a time it seemed destined to ecome the greatest establishment in this branch of trade, but its owners finally found it impossible to borrow any more money, and a huge collapse followed, extinguishing the concern totally. At present there are probably no works in the same condition, but manufacturers need to keep a closer supervision over those who represent them among buyers, or they may suddenly find themselves among breakers, without hope of rescue.

The American Society of Mechanical En- January, 1879-85: trade to reduce prices in order to meet the ment of the Patent Office Department at has of late repeatedly forth harsh criticism from many different sources, and deservedly so. The inventor of this country constitute so large a body and aid so materially in our industrial ad vance, that every facility should be afforded them in the attainment of their patent rights. That the present facilities possessed by the Patent Office are totally inadequate for the transaction of the enormous business which annually crowds upon the department needs no argument further than is furnished by every patent specification of recent date. Referring to them it will be noticed that in each and every instance the time elapsed between the date of application and the issuance of the specification is from six months to a year, and this delay must continue unless measures are taken for relief. The inefficiency of this department, as indicated in the circular referred to, is not due to the incompetency of its head, but to the action, or rather inaction, of Congress, which suggestion in the circular is that advocating an increase in the salary of the com-It is time that the attention of manufac- missioner of patents, so that the office

tion possessed by manufacturers and others tion of their interests in Congress. It is to Patent Office Department.

### Condition of the Blast Furnaces of the United States January 1, 1885.

In another column we give our usual quarterly report of the condition of the blast furnaces of the United States. It should be noted that in this report we have stricken from the list of furnaces quite a number that recent investigations have shown to be abandoned or practically out of existence. In our October report the total number of furnaces was as follows:

704 In the present report the numbers are: 231 225 224

A reduction of 24 stacks. Of these 24 there are 17 charcoal, 5 anthracite and 2 bituminous. We shall have more to say in a future issue on this subject. It is only necessary to state here that this permanent reduction in the number of furnaces affects chiefly forwarded a vigorous report to the Senate, the number and capacity out of blast, and giving 12 good reasons why the treaty that the better comparisons between the should not be ratified. Among them are tables of January 1 and previous dates will be with the figures "in blast."

In a condensed form the table for January 1, 1885, presents the following results:

	I	n blast.	Out of blast				
Fuel.	No.	Weekly capacity.	No.	Weekly capacity			
CharcoalAnthraciteBituminous	68 86 82	8,871 21,564 36,812	159 185 141	15,941 28,500 55,812			
Total	236	66,747	435	100,253			

This report as to number of furnaces in blast is very nearly the same as October 1, when 69 charcoal, 86 anthracite and 79 bituminous furnaces, a total of 234, were in blast. On the 1st of December 88 anthracite were in blast and 93 bituminous, showing that there has been somewhat of a reduction in the month of December. The reduction is chiefly at Pittsburgh.

The following table shows the condition of the furnaces at the beginning of each quarter last year and the 1st of January this vear:

	1	n blast.	Out of blast.				
Fuel.	No.	Weekly capacity.	No.	Weekly			
Charcoal	78	8,986	169 122	16,008 25,555			
Jan. 1. Anthracite. Bituminous	109 101	28,824 45,865	143	41,967			
Total	296	83,225	414	68,580			
(Charcoal)	62	8,718	185	16,654			
April 1. Anthracite.	107	27,612	121	26,605			
Bituminous	100	49,236	126	89,420			
Total	209	85,561	432	82,679			
(Charcoal)	80	10,280	167	14,725			
July 1 Anthracite.	101	26,949	180	28,765			
Bituminous	96	47,630	127	44,211			
Total	279	84,859	424	87,701			
(Charcoal	60	8,619	175	16,318			
Oct. 1. Anthracite	86	28,589	141	82,460			
Bituminous.	79	40,410	146	52,186			
Total	234	72,618	462	100,914			
(Charcoal	68	8,871	150	15,941			
Jan. 1. Anthracite	86	21,564	185	28,500			
Bituminous.	83	36,812	141	55.812			
Total	286	66,747	435	100,258			

This shows a reduction of 52 furnaces " in blast" in the year, of which 10 were charcoal, 23 anthracite and 19 bituminous.

The relative condition of the blast-furnace industry for the past seven years is shown in the following condensed table of furnaces in and out of blast on the first days of

commend to antid	03.					
NUMBER OF	FURN	ACES	IN BL	AST, J.	AN. 1.	
Charcoal 79 Anthracite. 96 Bituminous 82	1880, 98 165 136	1881. 160 162 151		1983. 128 169 138	1884. 78 109 101	1885 68 86 82
Total 957	884	478	466	480	288	236
NUMBER OF F	URNAC	ES OU	T OF	BLAST,	JAN.	1.
1879.	1880.	1881.	1882.	1883.	1884.	1885.
Charcoal 180		112	117	128	169	159
	67	76	67	64	199	185
Bituminous 123	80	68	78	88	125	141
Total 433	293	256	363	290	416	435
To make th	e chi	anges	mor	e evi	dent	we
subjoin tables a whole at differ	howi	ng th	e per			
NED GENTLOT	OF PU	DWACE	a m s	TO A ST	TAN	1

1879, 1880, 1881, 1882, 1883, 1884, 1885, 30 30 59 59 49 32 30 43 71 68 71 73 48 39 40 61 70 65 61 45 37 PERCENTAGE OF FURNACES OUT OF BLAST, JAN. 1. 1879, 1880, 1881, 1882, 1863, 1884, 1885, 70 61 41 41 51 68 70 5 57 29 32 29 27 54 61 8 60 39 30 85 39 55 63

The immigration statistics for the past year show a falling off of about 18 per cent. in the arrivals at all the ports in the United

1	1883.	The	total	are	88 1	Ollow		
1.			337-1-				1884.	186
u i	England reland	1 and	Wale	S			58 928	63,8
18	Scotlan	d					8,795	19.5
. 1	Austria						12,728	11,0
1	Jerman	y				1	154,501	180,8
1	taly						14,268	29,4
12	Norway						18,783	19,7
	sweden.							28,7
	Dominio							62,2
1	All othe	er cou	ntries				68,796	65,8
	Total						153,968	560,1

and Scandinavia. The movement from Gerdevised-for example, in Eastern Africa and by the annexation of New Guinea-apparently with the object not only of arresting a serious loss of resources in a direction whence there are small returns, but of opposing a barrier to British ambition in foreign fields. It is possible that an attempted diversion by these methods may be counteracted during the coming season by a gers by the Transatlantic steamers. Nearly all the lines but the English now offer a passage for \$14, against \$30 one year ago. The industrial depression being felt alike in Europe and America can have little effect either to promote or to retard the movement of population from one country to another.

### Reasons for Rejecting the Spanish Treaty.

The special committee of the New York Chamber of Commerce appointed to oppose the ratification of the Spanish treaty have the following:

It is not a reciprocity treaty. It should be termed a treaty for the relief of bankrupt Cuban estates, and to make the islands once more a source of revenue to Spain at the expense of the United States.

It would not benefit our manufacturers to any great extent, for the population opened to us is too small, and their purchasing power too limited. It would destroy our American sugar-producing interests, representing an investment estimated at upward of \$100,000,000.

It would seriously damage our important Amer-

can tobacco and cigar interests. It would strengthen and renew the fast-weaken-ing influence of Spain in American waters, and doubly injure American citizens: First, by throw-

ing large numbers out of employment, and, sec ond, by taxing the rest to make up for the revenues

presented to Spain.

It would enormously enrich the few persons who are pushing this treaty, just as the Sandwich Islands treaty has done, but this would be at the expense of the American public, and the public in-terest should not be sacrificed for private gain.

The committee calls attention to the political considerations, which it deems worthy of notice. Mexico and San Domingo, it argues, are sister Republics. The latter, especially, is in sympathy with the institutions and the people of this country, and from her position might be of much value in giving the United States a coaling station in case of war. On the other hand, Cuba and Porto Rico are dependencies of Spain and under Spanish rule of the most arbitrary character. Spain, it is charged, has uniformly treated American interests arbitrarily and unjustly. Helping Spain to continue her control over the only two islands in American waters which remain under Spanish rule would not. it is urged, be to the interest of the United These are potent arguments and should have due consideration with the Senate. New York has the largest interest in foreign trade of any city of the Union, and the interests which control the councils of the Chamber of Commerce are not likely to oppose a treaty which might promote a profitable foreign trade.

### Wages and Profits.

The officials of the Amalgamated Associa tion, commenting in their column in the Labor Tribune upon the article in our issue of December 18th, giving the rates of wages paid in the Eastern rolling mills, say :

Now, if The Iron Age will take pains to find out and publish the profits that accrue to the manufacturers who pay these remunerative wages, it will satisfy an anxious public.

manufacturers who are paying the wages referred to. In many, if not in most, cases they could be expressed in a very round state their profits, as the concerns are joint claim is that if there are no profits there reference to the gains of manufacturing. This is the basis that the Amalgamated Asociation itself and the unions preceding it have recognized for the last 20 years in their demands for sliding scales.

The remarks of the Amalgamated Association seem to proceed on the false assumpare correlative terms, one bearing the same relation to the laborer that the other does to product, not profits, are correlative terms. Out of what he receives for his labor-that is, his wages-the workman supports himindeed in many lines no profit whatever is being realized. Yet it is often difficult to ventors as a class have not that organiza
Of the arrivals for 1884, as above reported, being realized. Yet it is often difficult to ventors as a class have not that organiza
322,781, or two-fifths of the entire number, provides for the continued supply of labor. The plan of Mr. Trinks, there-

were landed at the port of New York. It when his own laboring powers shall have which is so essential to the successful promo- will be observed, respecting the different been exhausted, by providing for the support nationalities represented, that Germany sends and education of his family. The manufac be hoped, however, that the merits of their by far the largest contingent, but there is a turer does the same thing. Out of what he case will soon be recognized by the passage decided decrease in the number coming from receives—that is, the selling price of his of some bill for the relief of the overworked that country, as well as from England, Italy product—he pays for his raw material, the same as the workingman pays for his food, many meets with strong disapproval on the and provides for the continuance of manufacpart of that Government, insomuch that turing operations by keeping his works in special openings for colonization are being repair and putting in new and improved machinery, the same as the laboring man provides for the continuing supply of labor. What, if any, the workingman and the manufacturer may save over and above what is necessary to these expenditures is the profits of each. What the workingman may put in bank or what the manufacturer may put in bank, after providing for the above matters, or what each may spend in severe cut in the steerage rates for passen- his pleasures or luxuries, is the profits of each; but the profits of the manufacturer in no sense correspond with the wages of labor. Keeping this in view, the idea apparent in the quotation from the Amalgamated Association, that it was an impertinence on our part to publish the wages of labor unless at the same time we publish the profits of manufacturers, has no force. We do publish every week the thing that corresponds to the wages of labor-that is, the selling price of the various articles produced. Any one who chooses can have access to these facts. It is but rarely, however, that we publish the wages of labor. On the other hand, we do occasionally publish the profits of certain manufacturers, but we never, except in very rare instances, have published the profits of the laborer-that is, what he has aved in individual cases out of his earnings.

### Financial Condition of Brazil.

Brazilian finances are getting into so bad shape that the export trade of foreign countries to Brazil begins to suffer from it. Thus, the city of Joinville wanted to order last year cast-iron pipe for its intended water-works, but the loss in exchange or the depreciation of the paper milreis was found to be so great, being at present worth only about 41 cents of our money, that the ordering of the pipe had to be postponed, the cost of importation exceeding the appropriation by 71/2 per cent. The effect on our trade with Brazil is shown by the latest statistics. During the fiscal year 1883 there were shipped from the United States to Brazil domestic goods to the amount of \$9,159.330; during the fiscal year 1884 only \$8,645,261 worth, while in the latter year we imported \$50,265,889 worth of Brazilian products, against only \$44,483,459 in 1883. The aggregate indebtedness of Brazil in

1884 was 863,168,809 milreis, 169,213,333 of which the Empire owes abroad. The great difficulty in Brazil for the past 30 years has been a chronic annual deficit and the unpopularity of direct taxation. The Brazilian Congress not daring to tax the people directly, except to a very moderate extent. imposes about 70 per cent. of the revenue on commerce alone, and partially in the shape of export duties detrimental to the agricultural interests of the country. The budget for 1884-85 estimates the outlay at 133,049,000 milreis, toward which it is further estimated duties on imports will furnish 75,500,000 milreis, and those on exports 17,500,000; together, 93,000,000 from duties on merchandise. The remaining revenue is drawn 9 per cent. from indirect and 21 per cent. from direct taxation. Through the operation of the export duty the State levies a tax of 5 per cent. on all products leaving the country, which is money taken directly out of the pockets of planters, for Brazilian coffee or sugar or other produce will bring no more abroad than the foreign market can afford. Neither the import nor the export duties can be raised any further; if the former were enhanced the higher cost of goods would check importation and the revenue be no greater, and the latter duty is too much complained of and too injurious to We imagine that it would not be a very be thought of for increasing the revenue.

The State's direct income is comparative small. The diamond mines yield only 40,000 milreis per annum; 140,000 milreis are obtained from leases of Government lands naught. Some of these manufacturers do 75,000 from sales of the same, and 12,570,000 are the gross earnings of railways, from which stock companies, and the dividends are the expenses of running them must be deknown. But we confess we do not see what ducted. They figure "gross" on the budget. the question of profits has to do with the The post-office and telegraph services do not question of wages, and we had believed that cover the annual expense. The only direct every self-respecting workingman had long tax which seems to operate satisfactorily, so ago abandoned the idea that was prevalent far as productiveness is concerned, is again some years ago in labor circles, that the placed on commerce, merchants and manuprofits of manufacturers should be the gauge facturers being burdened with it There is, of wages. The logical sequence of such a furthermore, a tax on salaries generally, producing 520,000 milreis-a mere trifle should be no wages. The basis of wages is Lacking elasticity, as the various methods of the selling price of product, with little or no direct taxation do, the only remedy left would be a tax on landed property. The objection to it, if to be collected by the general Government, would be the difficulty of valuation and the army of tax gatherers it would require. A solution for this is suggested by a Rio financier, Mr. Gustavus Trinks, who proposes that the work of collecting the land tion that, in manufacturing, the wages of tax be done jointly by the State, the labor and the profits of the manufacturers provinces and municipalities, and divided between them pro rata, the tax to be large enough at the same time to do away with the manufacturer. The truth is that the the absurd export duty. The facilities of wages of labor and the selling prices of valuation and collection being greater if done chiefly by the provinces and cities, the Government would be sure to have the task performed with more equity and greater

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porated in a bill the Brazilian Government may prevail on Congress to pass it, the more so as it needs 70,000,000 milreis for funding the present floating debt, and will have to appeal to European capitalists to place this new issue of bonds, as the money cannot be a supposed for the present floating debt, and will have to appeal to European capitalists to place this new issue of bonds, as the money cannot be never to heaven to follow the present floating debt, and will have to appeal to European capitalists to place this new issue of bonds, as the money cannot be never to heaven to follow the present floating debt, and will have to appeal to European capitalists to place this new issue of bonds, as the money cannot be never to heaven to follow the present floating the presen new issue of bonds, as the money cannot be new issue of bonds, as the money cannot be raised at home. The passage of such a bill \$35.50, the lowest price in the history of the course. might suffice to inspire them with confidence, which it is evident they cannot have under prevailing circumstances.

### An Iron Trade Romance.

There is always a reason for every bappening. We may be sure of this, even in the case of happenings which seem proall, and which casual observers formulate from the surface indications, are not always the correct explanations. These very general should be borne in mind when we read the article in a recent issue of the New York World tracing the causes which led to the lately anounced suspension of Oliver Bros. & Phillips, of Pittsburgh. We regret the necessity which compels us to confess that a journal occupying the position of The Iron Age must temporaneous history, which is both surprisneeds look to the daily press for light on subjects peculiarly within its special field, but it would be disingenuous not to admit that the World tells us many things we did not know before, and never should have known had not the editor of that estimable ournal detailed to the duty of explaining the failure in question a writer with an analytical mind who believes in going to the root of things. We quote as follows :

The beginning of the present trouble dates back a number of years, when seven of the leading fron companies in America formed a combination known as the Bessemer Steel Company of

when the "Bessemer Steel Company of America" was formed, but we did not know before that Oliver Bros. & Phillips shared this trouble in any important degree, or had any hand in helping make it. Evidently there are innermost secrets connected with the organization of this troubleson e company which we have not probed. We restrain our impatience and read further :

These companies had theretofore been the manufacturers of what was known as the blue specular iron and the he satite, a reddish metal. Some years ago Bessemer, the great English manufac-turer, came here with a patent by which the com-bination of these two qualities of iron could be manufactured into what is now known as Besse-

We have long suspected this, but have never dared to say it in the absence of proof. never dared to say it in the absence of proof. Who can wonder that the Western railroad engineers have growled about the quality of rails furnished them, when they were approaches, the scarcity of pig iron may labilities, and \$1,250,510.99 assets, and make a labilities, and \$1,250,510.99 assets, and make a nothing but a mixture of blue specular iron and a reddish metal popularly known as hematite? No wonder the steel-rail makers quence, and the result will be a general buyturned up their noses at Dudley's formulæ, and insisted that they knew more about the chemical composition and physical properties of steel rails than he did. Evidently they knew a great deal more, if this is the way they worked the Bessemer process. How the valuable secret came to be a monopoly

the World relates as follows: Bessemer undertook to sell his patent, or the right to manufacture under it, to all the rolling mills in the country, of which there were about 3). At that time Oliver Bros. & Phillips, the Beth-lehem (Pa.) Iron Company and five others bought the patent and manufactured steel under it.

Part of this we know to be true, and a trifling error in one or two minor particulars only serves to show that the writer has penetrated the very heart of the mystery. We remember Mr. Bessemer's visit very well, and knew his errand. We were sack he used to mix them and so make his Only seven concerns bought shop spent all his collections in railroad fares and total bills, some of his friends in New York nade up a subscription to buy him a return ticket to England. These details, however, are immaterial. We quote further:

Subsequently an arrangement was entered into mong these companies by which three of the ulls were to do all the work and the other four-were to remain idle, the stockholders in the latter of receive monthly a certain amount equivalent to high as \$49 a ton.

We do not remember at the moment one of the three which worked the Bessemer But it is unimportant. They were identified with the conspiracy which advanced the price of pig and rail iron to \$49 at one time, and the reckless habits of exwhich that price insured sufficiently explain the subsequent bankruptcy of everybody who participated in the division. What they did during the brief hour of their triumph the World tells us with impartial axis to the subsequent \$300,000 are on notes held by the subsequent s

tenuating nothing:

Alas, too true! Then came a break. It was a bad break, too. Even blue specular iron and hematite cannot be profitably mixed for \$26.50 per ton. The story carries its own moral. Let us hope that the lesson of experience will not be lost upon those who have suffered so heavily, and that in future we shall witness no efforts to create an artificial foundly mysterious. The explanations of famine in the trade at times when our mills happenings which do not seem mysterious at are overstocked. No one who engages in such operations can expect to avert the inevitable. The example of Oliver Bros. & Phillips should be a warning to other houses statements cover certain basis facts which in the trade. We should apply these sad happenings as our Puritan ancestors applied all Scripture," by way of improvement, draw from them the lesson they are found to contain when we search out the reasons for them. We are indebted to the World for a new and wholly original contribution to conng and impressive.

### Better Outlook for Pig Iron.

An increased movement in pig iron is a gratifying feature of the iron trade. When any branch of business has been quiet for a long time, a renewal of activity in it is apt to awaken false hopes. Those interested are inclined to believe that another season of prosperity is before them, and they permit themselves to indulge in rosy anticipations, which are unfortunately not realized unless external conditions are favorable. One We are aware that more or less trouble of branch of business cannot be prosperous if assorted varieties dates back to the time all others are decaying. A reaction in the pig-iron trade toward greater business, and M perhaps toward better prices, does not seem unlikely after the steady drag of the past 12 months, but it is not quite time to bid farewell to depression and low prices. The production of pig iron at the present time is very probably under the demand. The at about 17 per cent., as compared with 1883, but it must be borne in mind that the greatest part of the decrease was effected in the last half of the year, so that we are now producing at a considerably lower rate than that of last year. Notwithstanding the general stagnation in business, a very great deal of pig iron will be required this year, and it is a question whether 3,000,000 tons, which shrinkage in production in 1884 is estimated is a question whether 3,000,000 tons, which make itself very noticeable, inasmuch as the country has no stocks of any conseing movement, which may put prices up slightly. This, however, will be a temporary movement, if it occurs, though it will be a very important one to those consumers of pig iron who have contracts to fill during the spring months, and to whom \$1 or \$2 a ton may make a serious difference. Later in the year the probabilities are in favor of dull trade again, with accompanying ease in prices, unless a change comes over the whole country in the meantime and industries revive generally.

### Troubles of Oliver Bros. & Phillips.

The firm of Oliver Bros. & Phillips, of Pittsburgh, have rapidly grown in importance until they rank among the largest iron manufacturers in the United States. present at the grand banquet given in his Their productions in the form of bar or plate onor in the basement of Moquin's, in Ann iron or heavy hardware are sold in almost street; but the World is mistaken as to the number of rolling mills in the country at members of the firm are widely known for that time. There were 21 of them. Mr. Bessemer spent several days visiting them and offering his patent for sale after a made their rolling-mill establishment conpractical demonstration of his process. He spicuous for its magnitude and completeness, carried some blue specular iron in one but they have embarked boldly in other pocket and some hematite in another, and in directions, undertaking enterprises which plumber's ladle which he had in his grip- would of themselves have been sufficient to occupy the entire time and energies of less enterprising men. Their colossal underrights, however, and, as Mr. Bessemer had takings, however, have been affected seriously by the profound depression in business which has now continued so long, and their efforts to stem the tide have been unavailing. Last week they were obliged to suspend payment, temporarily we hope, and the announcement of their trouble naturally caused a great deal of excitement throughout the iron trade of the country, though in some quarters it blast. The other three companies opened their furnaces, setting men to work, and advanced the price of pig and rail iron until at one time it was shigh as \$40 a ton. tending. They have the sympathy of their fellow-manufacturers in this their day of humiliation, and the belief is generally exwhether Oliver Bros. & Phillips's mill was pressed that, if their creditors are lenient, this ambitious firm will not fail in due time oceas, or one of the four which remained to emerge from their troubles with as bright prospects as ever. A meeting of the creditors took place on Tuesday, and on Tuesday evening we received the following dispatch from our Pittsburgh office:

this latter amount \$300,000 are on notes held by revision of the tariff by the next Congress. World tells us with impartial exactness, ex-anuating nothing:

They regulated the product as they saw fit by re.

\$2,319,853.42, of which \$1,506,084.65 are in property;

\$50,000, the interest of the firm in the Pittsburgh The by re. \$50,000, the interest of the firm in the Pittsburgh Hinge Company; \$16,200, interest in Iron City line as the House Committee on Inquiry as New York, Lake Erie and Western Railroad rates."

fore, has a great many advocates. If incor- an effort to create an artificial famine in the trade, condition of the BLAST FURNACES OF THE UNITED STATES, JANUARY 1, 1885.

(Compiled for The Iron Age.)

	Charcoal.						Anthracite.					Bituminous or Coke.						
Location of Furnaces.	Total number of stacks.	Number reported in blast.	Capacity per week.	Number reported out of blast.	Capacity per week.	Total number of stacks.	Number reported in blast.	Capacity per week.	Number reported out of blast.	Capacity per week.	Total number of stacks.	Number reported in blast.	Capacity per week.	Number reported out of blast.	Capacity per week.			
New England New York New Jersey	15	2 5	420	0	680	40	9	2,200	-		I				28			
Spiegel						17		, ,					*****					
Pennsylvania.	22	10	641	20	1 260	4												
Lehigh Valley						ET	24	7,005										
Schuylkill Valley						4.4		0 7 07		3,855								
Upper Susquehanna Valley						2.4												
Lower Susquehanna Valley						20	23	4.870	16	2 700								
Pittsburgh											17	7	5,130					
Allegheny Valley											4	1	85					
Shenango Valley										- 1	28	9	4,420		6,45			
Youghlogheny Valley											6	4			57			
Juniata and Conemaugh Valley											27	14	4,744	13	3 07			
aryland	15	3						220			X	0		X				
irginia. orth Carolina.	30	8	378								12	9	4,051	3	360			
est Virginia	0	1																
hio-Mahoning Valley	5	0		5	289		1 1 0 10				18	1	1,000		1,926			
Eastern, Central and Northern											18	5	2,240	- 10				
Hocking Valley											15	ï	130					
Hanging Rock	IO.	9	780	10	880						15	7	1,276		1,565			
Miscelianeous	2		,	2									1,1,0		1,505			
entucky											3	Y	400	2	750			
Hanging Rock	6	3	310	3	265													
Western Region and Miscellaneous	8	0		8	875													
onnessee	9	4	370	5							8	5	2,060		1,540			
sorgia	6	1	200	5							X	1	600	0				
abama	IX	7	1,810	4							10		3,490		1,160			
dianainois	I	0		1							2			2	400			
chigan			0.000										2,800		9,175			
isconsin	28	2	2,328	18							3			2	580			
nnesota		_												3	1,540			
ssouri	9	1	350	8	1.538						8	0			4,360			
xas																		
ah																		
egon																		
1 1																		

tees named by the creditors. To these semi-annual reports will be made of the condition of the firm, similar proposition. The meeting appointed a committee of five to audit the statements. They elected Alex. M Byers, Jas J. Donnell and Orlando M. Harper, trustees, and adjourned until Thursday, when final action will be taken. It was agreed on all hands that the showing of the firm was eminently satisfactory—much more so than was expected—and no doubt was expressed as to their ability to meet their obligation

It will be seen from this statement that the affairs of the firm are by no means beyond hope of recovery. A few years of moderate prosperity would enable them to discharge their indebtedness and resume their old position among the solid manufacturing establishments of the country.

Wright, of Massachusetts, to be Commissioner of Labor Statistics. This appointment will be greeted with universal satisfaction, as Mr. Wright's services in the circumscribed field of Massachusetts industries have been attended with great success. The results of his investigations into the various conditions of workingmen's existence have been accepted by the most critical publicists as unquestionably conclusive. Mr. Wright Wright, of Massachusetts, to be Commismination to get at the truth, and he therefore perverts nothing in order to demonstrate a pet theory. This freedom from bias naturally commends his reports to all classes of economists, and his translation to a higher sphere of activity will give him much better opportunities to make such extended observations as are necessary in order to deduct economic laws and establish generalizations.

### WASHINGTON NEWS.

(From Our Regular Correspondent.)

WASHINGTON, D. C., January 20, 1885 The official promulgation of the tinnedplate decision has been delayed on account of the indisposition of one official and absence of another. The decision has been prepared, and will not be of great length. It only awaits the signature of the Secretary of the Treasury. It will doubtless be signed on Thursday. The chief features of the de-cision will not differ from the announcement already made in this correspondence. It decide substantially that all sizes a thicknesses of iron covered with a coating of tin have, under the practice of the custom houses at Philadelphia. New York and Bos ton, been commercially known as tinned plate, and classified accordingly. This de-cision will meet with decided opposition from the home manufacturers, but whether any further steps will be taken, in the courts or elsewhere, remains to be seen. The only effective chance will be in the proposed

A REPORT ON ORDNANCE AND WAR SHIPS.

TESTS OF IRON AND STEEL.

The Committee on Printing have reported favorably a resolution to print the annual report of tests of iron and steel and other materials for industrial purposes, by Major F. H. Parker, commanding Watertown Arsenal. This report, despite its value to mechanical engineers and scientists, has usually been about a year behind, owing to the tardiness of Congress in authorizing its printing. It is now proposed to hasten the work, so that it may be of some practical value to parties

### INTEROCEANIC PROJECTS.

Captain Eads has left the city, satisfied that during the few weeks remaining of the session there will be no time for the considera-tion of any business other than the Appro-priation bills. He said, before leaving, that he was satisfied of the defeat of the Nicara-gua treaty if it should be brought to a vote A Washington dispatch reports that the President has decided to nominate Carroll D. Wright, of Massachusetts, to be Commising been expended in digging about 3 miles and asked as to the status of the ship railway.

### RAILROAD FEDERATIONS.

In his report upon the transcontinental railroads of the United States and the rail-roads of contiguous countries—the Dominion of Canada and the Republic of Mexico—the chief of the Bureau of Statistics conveys much useful data upon the development of the natural resources of the country and the growth of our internal commerce. omparative statement of the material re sources of the United States in 1850 and 1880, the growth of 30 years is shown. It indicates not only territorial expansion, but agricultural, mining, railroad and mechanical extension unrivaled in the world. The following exhibit illustrates this develop-

ment:		and the first
	1850.	1980.
Improved land in farms,		
acres	113,032,614	284,771,043
Wheat produced, bush.	100,485,944	420,174,500
Corn produced, bush	592,071,104	1,551,066,895
Houses on farms, num-		
ber	4,836,719	10,838,111
Milch cows on farms,		4 W 4 O W 10 O W
number	6,385,094	18,125,685
swine on farms, num-	00 001 010	40 000 000
ber	80,854,219	43,270,066
ig iron produced, tons.	568,755	5,146,972
coal produced, tons	7,858,999	96,000,000
Railroads in operation,		
miles	9,021	121,592
Value of products of		
manufacture\$	1,019,106,616	\$5,369,579,191

A most striking illustration of the changes A most striking illustration of the increase in the cost of transportation and the increase annual freight charges on trunk lines fell from 2.453 cents per ton per mile in 1868 to 1.803 cents in 1873, and to 1.055 cents in 1883. The tonnage, meanwhile, on the New The Select Committee on Ordnance and York Central increased from 1,846,599 tons

The attention of Members of the House of Representatives has been called to the fact that in several of the countries of Europe the agricultural population is beginning to make an outcry against the free importation of American agricultural products. The revenue reformers claim that this is in retaliation for our prohibitory legislation on articles of manufacture, and the tariff men reply that that has nothing to do with it, that it is the principle of English free trade only, applied to exports of American cheap breadstuffs into foreign countries, to the detriment of home agriculture instead of to imports of cheap foreign manufactures into the United States, to the injury of home manufactures there. It will introduce, however, a new element into the discussion of the tariff question when it does come up. The American hog question was a practical illustration of the effect of foreign discrimination, and the remedial measures proposed were not free trade for German products, but retaliatory measures against German wines and other products of the country largely in demand in the United States, and, therefore, a source of wealth to German producers.

### AMENDMENT TO DRAWBACK LAW.

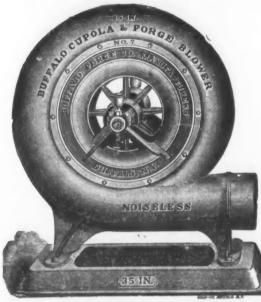
Mr. Hewitt, from the Committee on Ways and Means, has reported a bill directing the repayment of the whole duty paid on materials subsequently manufactured and exported. Under the law as it now stands, 10 per cent. of the duties has been retained by the Treasury to pay the cost of customs administra-

Progress of the Fads Ship Railway.— Capt. James B. Eads was recently interviewed while on a brief visit to Pittsburgh "The public is pretty familiar with our efforts two years ago to get Congress to guarantee the interest on \$50,000,000 at 4 per cent. for a term of years. successful in that, but have almost practically obtained the same concession from the Mexican Government. General Diaz, during his previous term as President of Mexico, was enthusiastically in favor of the enter-prise, and since his re-election additional valuable concessions have been assured us. We have ample capital subscribed. There are about 40 stockholders in Pittsburgh, besides others in St Louis, Cincinnati, New York and other cities. We can get all the money we want in London, but prefer, if it can be done, to have the money raised in this country.'

The Rival Boston Exhibitions. - A letter from Boston says that the war of the two mechanics' exhibitions has brought out the fact that, while the New England Manufacturers' Institute has gone into bank-ruptcy, the old Mechanics' Fair is next thing to it Two great buildings were totally unnecessary, but neither would leave the field clear for the other; the consequence is that both are financially embarrassed. his week a social or tea party for the relief of the association was discussed, and also an assessment of members, to clear off the most pressing of the liabilities.

As we are about to go to press we are in receipt of the following dapatch from our Philadelphia office; "Sales to-day of 8000 to 10, 200 tons of low-grade pig irons, includNEW AND IMPROVED

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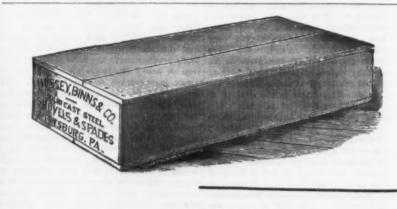
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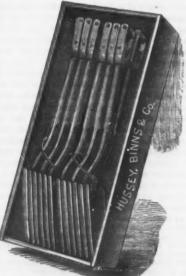
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### Railway and Machine A Rare Chance for Foundrymen New & Second-Hand Machinery. and Machinists.

The G. A. Kelly Manufacturing Co., 3½ miles west of Jefferson, Texas, on the M. & P. R.R., will be sold at a bargain, as the present owners (bankers and merchants) are inexperienced in this line of business, and have not the time to devote

into of rusiness, and have not the time to devote to operating same.

Without exception, it has the finest machinery for putting up Wagons, Plows, &c., by Steam in the South, and by an addition of patents any and all articles made of iron can be successfully made. A Furnace situated a mile from works, making Car Wheel and Foundry Iron second to none

none.
Plows of this Company's make have a wide aud established reputation, with a good trade in Arkansas, Louisiana and Texas.
There are belonging to Works to Acres of Land, with sufficient Houses for accommodation of employees. Situation healthy, with abundance

f pure water. Works unen cumbered. Timber plentiful adjacent Works. For further information, address

R. BALLAUF & CO., General Managers, Jefferson, Texas.

# WHAT ARE YOU LOOKING FOR?

I have on hand a very large stock of New second-Hand Machinery, comprising ENGINES. Automatic and Slide Valve,

STEAM AND BELT PUMPS. STEAM ENGINE GOVERNORS. MACHINISTS' TOOLS,

BOILERS. Vertical and Horizontal,

HOISTING ENGINES, WOOD-WORKING MACHINERY, STURTEVANT BLOWERS.

Write and state your wants, and will send full

### HENRY I. SNELL, M. E.,

135 N. 3d Street. PHILADELPHIA.

### For Sale.

FACTORY NEAR INDIANAPOLIS, IND.

The buildings and 7 acres of lat d known as the Telephone Factory, located just outside of Indianapolis, with a switch connection on the C. I., St. L. and C. R. R. Main building, roo x 50, brick, three stories, slate roof and elevator in center. Adjoining building, 20 x 40, two stories of brick. Engine and Boiler building and Smoke Stack of brick. Modern built 250 H.-P. Engine, of first-class make; 2 boilers and acting; main line shafting and pulleys. Everything in good condition. Suitable for light manufacturing of any kind, or for Furniture or Agricultural Implement busness. Cheap coat; small taxes; best point in the West for cheap freights. For sale cheap. Address

WESTERN ELECTRIC CO., Chicago, III.

Manufacturing Plant for Sale, Cheap.

Manufacturing Plant for Sale, Cheap.

The property consists of 12 acres of land, with dam, flumes and buildings that are nearly new. The water-power is never-failing, and abundant. The Factories consist of.

One Brame Building, 32 ft. x 36 ft., with L,
One Frame Building, 37 ft. x 17 ft.,
One Frame Storehouse, 36 ft. x 24 ft.,
and on the premises are Five Frame Tenements. A double track railroad siding runs to the factory doors, and has a new Fairbanks Track Scale. The plant has been used as a foundry and machine shop, but is adapted to any manufacturing where good power, good light and plenty of room are necessary. The location is near Hartford, and affords cheap trainsportation to all points at as low rates as any pace in New England. The property will be sood at a very low price. For particulars, address
No. 66 Walnut st. Hartford, Conn.

### For sale.

A bright, clean stock of Hardware. Stoves and Tinware, in one of the best towns in Southern Michigan; population about six thousand; Stock will invoice about \$9500, and in fine condition. Good chance for an energetic Hardware man. "MICH. OPPORTUNITY,"

Office of The Iron Age, 83 Reade st., New Yors

FOR SALE -The Fitzmorris & Smith F undry For Sale—The Fitzmorris & Smith F undry Facing and Supply Co., consisting of my stock in trade, machinery and good-will with lease of grounds and building. The Machinery consists of a run of six Mills (lower runners) Botting Chests, Conveyors, Elevators, &c., appertaining; all in splendid running order and used daily by me. I will also give the recipes for the following mixtures of facings: National Return, Excessior Return, Favorite keturn; three kind of heavy machine, turee kind of stove-plate and other mixtures of facings. These return facings are acknowledged to be superior to any other manutactured. Any further information, inquire of E. S. HERANCOURT, Clincinnati, Ohio,

### FOR SALE.

Reliable Water-Power and substantial Dam. Shippin: facilities by canal and railroad unsurpassed. For particulars, address JAMES YOUNG

### Middletown, Pa. For Rent

AT BRIDGEPORT CONN ..

A brick factory, 55 x 162 feet, with a high base ment and two stories; with 40-horse steam power P. O. BOX 5, Bridgeport, Conn.

### Traveling Salesman Wanted

For the Middle States. Must be thoroughly posted in general Hardware and House Furnishing ne others will answer. Address, giving age experience, references and full particulars, "JOBBERS, Office of The Iron Age, 83 Reade st., New York.

Salesman Wanted,

### Calling on the prominent Hardware dealers and

Iron and Steel concerns, particularly in New York and New England, also elsewhere, who will handle on commission with his own line a first-class staple specialty for a manufacturer. "CARRIAGE HARDWARE."

Office of The Iron Age, 83 Reads st., New York.

A N Analytical Chemist (26) who has had a large and varied experience in analytical and technical work, desires position with Iron master or other; was last employed with large manufacturer in Scotland. Excellent testimonials, references, &c. Address

Office of The Iron Age, \$3 Reade St., New York.

WANTED—Situation as Superintendent, Foreman, or position of trust by a man of 25 years' practical experience in the manufacture of all kinds of Steel in all its branches. Address BOX No. 138, Catasauqua, Pa.

### Special Notices.

| Regine Lathe, 10 in. x 3\( \) ft. teach, Engine Lathes, 11 in. x 4 and 5 ft. teach, Engine Lathes, 11 in. x 5\( \) ft. teach, Engine Lathes, 14 in. x 5\( \) ft. x 5\( \) ft. To in. x 5\( \) ft. x 5\( \) ft. teach, Engine Lathes, 15\( \) in. x 5\( \) ft. x 6\( \) ft. To in. x 5\( \) f

" 30 lin. " 28 ft.
" 29 ft.
" 20 ft.
"

SECOND-HAND. Engine Lathe, 15 in. x 6 ft. Wood & Light.

15 in. x 6 ft. Chelsea Machine Co.
Engine Lathe, 24 in. x 3 ft. Taper Attachment.

Planer, 24 in. x 24 in. x 6 ft.

20 in. x 20 in. x 5 ft.

60 in. x 50 in. x 17 ft.

Crank Planer.

Crank Pfaner.
2-Spindle Edging Machine.
2-Spindle Edging Machine.
Lincoln Fattern No. 2 Millers.
Edic Cutter No. 2 Millers.
Solond-Hand Selers " Miller.
Second-Hand Selers " Miller " Millers.
Second-Hand " Brainard" "
" Brainard" " Universal Miller, good as New.
1 Plain Upright Drill, 30 in. swing, Wood, Light & Co.
2 In " Solo." " Tools and Supplies. All kinds Machinists' Tools and Supplies.

NEW YORK AGENCY OF THE TANITE CO., GRANT & BOGERT MACHINE TOOL WORKS, and for the NEW POLISHED SHAFTING. H. PRENTISS & CO., 42 Dev St., N.Y.

Engines and Boilers. NEW AND SECOND-HAND.

The following new Slide-Valve Engines guaran teed complete and first class:

One 14 x 24. One 14 x 26.
One 14 x 18. One 16 x 24.
One 18 x 18. One 18 x 14.
One 12 x 10.
One 18 x 16.
One 18 x 16.
One Corlias Condensing Beam Engine, 32 x 72. sd-h.
One 8 H. P. Horizontal Tubular Boller.

Large stock assorted sizes new and latest im proved Engines and Boilers Come and examine our stock. Plans, estimates and specifications furnished for mills and factories, guaranteeing best results; steam engine indication; cardi-demonstrated for economy, &c. Send for circular

NEWELL UNIVERSAL MILL CO. to Barclay Street, New York.

# SCRAP IRON

FOR SALE. MIXED WR'GHT TURNINGS IRON SHEET AND HOOP IRON. STOVE PLATE IRON. R. R. SPIRAL SPRING STEEL WAGON & BUGGY SPRING STEEL R. R. FLAT SPRING STEEL.

TOOL STEEL. Soilers, Tools, Fixtures, Usable Iron and Beiting,

### A. LIEBERMAN, Nos. 1443 and 1501 to 1507 State St., Chicago, Ill. 800

Engines and Boilers FOR SALE.

I am crowded for room and wilt sell cheap or

trade for Nails, Bar Iron or Pipe. H. M. SCIPLE, 107 and 109 N. Third st., Philadelphia.

### For Sale.

Stewart's Patent SPARK ARRESTER, the only reliable Spark Arrester made; it will prevent all sparks from ascencing the STACK without choking the ARRESTER. Correspondence solicited from railroad companies, engine manufacturers, &c. State rights for sale. Models sent if desired. GEORGE STEWART, Winston, N. C.

### LAMBERSON'S

Hardware Price Book Pocket Edition. 240 Pages. Revised and Improved, 1884. One copy, \$4.00; three copies, \$10.50; six copies, \$20.00. Sent, post-paid, to any address on recelpt of price by B. LABBERSON, Portland, Oregon; David Williams, \$3, Reade St., N. Y., A. F. Shapleigh & Cantwell Hdw. Co. St. Louis, Mo., or William Blair & Co., Chicago, Ili.

### E. BISSELL & CO., Wholesale Hardware Auctioneers, 83 Chambers and 65 Reads Sts., N. V.

Sales held weekly for the trade. Consignments olicited. We refer to the leading manufacturers

# A RARE OPPORTUNITY

For a profitable investment in a large established Manufacturing Business, centrally located in the city of Chicago, including a Machine 8-bop, &c., completely equipped with first-class modern tools a full inne of patterns for the best-known slide-valve engine in the We t; also variable and some automatic cut-off engines, and some special tools, all widely and favorably known. Desire to close out the entire business on acc unt of failing health. Includes the good-will and a long lease. A bargain and favorable forms to the right party. Address.

Office of The Iron Age, 46 Clark street, Chicago, Ill.

### 59 DUANE ST.

We have rented the above-named building in New York City for a salesroom and branch factory, and shall be glad to see all our old friends and patrons, as well as any in need of anything in our line. Dies a specialty. THE STILES & PARKER PRESS CO.,

Middletown, Conn.

### Special Notices.

### For Sale.

Will sell cheap for cash and time payments, or  $w_{\rm HI}$  exchange for real estate or lumber, any part of the following machinery, subject to inspection before

Train of Lauth's 24 in. 3-high Rolls.
Train of 2-high 22 in. Plate and Sheet Rolls and 100 plates wells.

Place to the Soft R IIs and Duplicate Rolls.
Train of zo in. Soft R IIs and Duplicate Rolls.
Compound 18-inch Muck Train and Duplicate Rolls.
Large Engine, 32 x 42, horizontal, zo-ton fly, doubly braced wheel, 12 in. far

Large Fump. Large Cranes for Handling Housings and Rolls. Plate Shear to shear as high as %-in Plates. Sheat Shear.

Sheet Shear.
Shaping Snear.
Muck Shear.
Scrap Shear.
Scrap Shear and Engine.
Large sturtevant Biower and Pipe
surnace Plates for 4 Charcoai Fires, including Valves

&c. Hattery of 3 extra flange Fire-box Boliers; size 28 ft. by 48 in; 2-flue, 16 in. 10 operate together of separate; with air connections. Large Boller, fire-box metal, 28 ft. by 32 in. or 44 in Small Boliers, 22 ft. by 42 in. Track Scale, Wagon Scale, Mill Scales. Tools, Tramways, Buggles, Fatterins, &c.

PLATE & BAR MILL CO., Room 7, 130 Dearborn St., Chicago, III.

IRON PLANERS FOR SALE. All Second-Hand.

One 36 in. x 36 in. x 8 ft. 8 in. bed. Made by Barr of Wilmington, Del. Three by Bement & Son, Philadelphia, 30 in. x 3

in. x 8 ft. 6 in. bed. One so in x so in x 6ft, 6 in bed.

One No. 1 Newton Milling Machine, JOSEPH LUMLEY.

> 144 North Third st., Philadelphia, Pa.

One 18 x 42 Putnam Automatic Cut-Off Engine, One 14 x 24 Cooper Automatic Cut-Off Engine, and several large and small Slide-Valve Engines, second-hand. Also complete stock of new Engines, Boilers, &c Special bargains in Steam Pumps.

For Sale.

WARREN SPRINGER, 195 to 221 S. Canal st., Chicago, III. For Sale.

Pottsville, Pa.

### whinder so inches internal diameter, with neessary sheaves. Will hoist two barrows of stock at once. Apply to POTTSVILLE IRON AND STEEL CO.,

One 50-foot Air Hoist for Blast Furnace, air

For Sale.

### Second-hand DROPS and LIFTERS.

BEECHER & PECK, Lock Box 222, New Haven, Conn.

### For Sale.

File factory, 30 miles from New York, fully equipped for manufacturing Ha -Cut Files. Engine, Boiler, Tools, &c., complete Apply to CHALMERS & MUREAY.

### 76 Reade St., New York.

For Sale. One set of Boiler-Makers' Rolls, six feet. One two-ton Weston Hoist. One one-ton Harrington Hoist.

> LOVEGROVE & CO., 152 N. Third St., Philadelphia, Pa.

For Sale Cheap. Nos 1/4 and 5/4 Baker Blowers; Nos. 1/4, a, 5 and 7
Root Blowers; No. c McKnozie; Nos. 3, 4, 6, 7, 9
and 10 Sturtevant Blowers; Nos. 2, 5, 34 and 2
do. Exbausters; Ore Crusher; two Sturtevant
Disc Exhaust Ventilating Fans. 10 feet diameter;
6/4 x 5/4 in. Boat Engine; 10 M.-P. Marine Boiler.
Wanted, No. 3 or 4 B. Ker Blower, 33 Sturtevant
Exhauster or No. 8 or 9 Monogram do.
C. R. BIGELOW, M. E.
Room 7, 22 New Church St., New York.

### For Sale.

An established wholesale and retail Hardware business in rapidly growing city in Central Ohio, with best of shipping facilities. The best opening in Ohio, Address X. Y. YOUNG. Columbus, Ohio,

A prominent European firm dealing in Wood working Tools (Planes, &c ) is desirous of ecuring experienced representatives to effect

sales in the larger cities of North America under

favorable conditions.

Office of The Iron Age. 83 Reade St., New York. A Gentleman of many years' experience wishes to engage in

a business in which he could invest from \$15,000 to \$20,000. Address "INVESTMENT."

### Office of The Iron Age, 83 Reade st., New York Any One

who will send me the name or give me such infor-mation as will lead to the sale of a Boiler Engine or Mill, will receive a regular commission H. M. SCIPLE.

107 to 109 N. Third st., Philadelphia. Wanted.

Position as Chemist in an Iron or Steel works laboratory by a young man. Have worked on Limestone, Iron Ore, Coal, Slag and Silicon, Sulphur. Phosphorus, Manganese and Carbon in Iron and Steel. Can furnish balance and necessary apparatus for work. Address W. M. GIBSON, Portanguth Obio.

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Lot Tools Works fo BE

M. r Pit Le Engir 16 la x 13-spin 136-in. 12 in. 1 Large 1 Small 1 Hand 1 Rotar 1 Bar-Ir 1 Foot-I The arc at a sacri Have a cheap.

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### Special Notices. ROOT'S ILLUSTRATED HARDWARE PRICE BOOKS

were successfully introduced the past year, een improved for 1885, by using extra heavy have been improved for 1885, by using extra heavy interleaving paper, with red ink down rutings, and by adding \$4 extra unbound printed and illustrated pages pertaining to miscellaneous lines on which stocks vary, of which each house can insert such as interest them. The 289 pages, bound in the regular books, show mainly the lines on which all leading American hardware stocks agree, carefully selected in the interest of the merchant, from 211 different manufacturers, with 1574 illustrations, many of them full size. Books sent at once, charges prepaid, on receipt of the foliowing

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nicely bound, with dark-colored genuine moroccobather flexible cover and flaps, with pocket inside
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er copy. No 2, like No. 1, but red Russia leather. Price No 2, like No. 1, but red hassis terrleaved, con 17 per copy. No. 3, like No. 1, but doubly interleaved, con plus 717 pages, 478 of which are the extra heavy in 11 pages, 478 of which are the extra heavy in-ving paper, with red ink head-lines and down which gives two interleaved pages for noting instead of one. 2 of The sale of No. 3 now equals all the other numbers. Price, r conv.

No. 4. like No. 1, but without flap or pocket.
Price, \$6 per copy.
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Price, \$7 per copy.
No. 5, like No. 4, but red imitation Russia leather. No. 3, 188 No. 4, out of Price, S6 Per copy, Old No. 2, with taghter interleaving and without down ruling. A few copies are in stock, which will be closed out, including the 84 extra pages, at Price

per copy. pecial Prices given to houses ordering six or o copies at one time.

"In ordering, state if you prefer Tin, Wooden
Hollow Ware left out. If not so stated, complete
ks will be sent, including these lines. These Price
ks are indispensable to hardware buyers, travelers
clerks, saving often \$100 to \$200 in time, and givbetter satisfaction than those made in the ordinary

### T. W. ROOT, Detroit, Mich. Machinery for Sale.

12 X 20 Horizontal Engine.
16 X 30 Horizontal Engine.
Upright Drills, No. 2 Blalsdell.
Nut Tapper, 2 Roindle, No. 2 Durell.
Boit Cutter, No. 5 Schlenker.
Double-Head, No. 4 Schlenker.
York & Smith.

Hydraulic Wheel Press.

Bydraulic Wheel Fress.
koot's Blower, No. 4.
combined Puuch and Shears.
car Tenoner, No. c. Vertical.
Boring Machines.
car Mortiser. Lane & Bodley.
jaimer. London, Berry & Orton.
culcan Power Hammer. W. F. Duncan & Co.

ulcan Power Hammer. W. F. Duncar mery Grinders. Joit Pointer. John Pointer. Janer and Matcher, 8 Rolls. Schenck. Jairoad Cut-off Saw.

Railroad Cut-off Saw.
Jig Saw.
No. 6 Sturtevant Blower.
Lot Tools, &c.

Works for rent or sale.

BELLEFONTE CAR WORKS,

BELLEFONTE, PA. Second-Hand

MACHINERY.

### To Capitalists or Manufacturers,

### Wanted—Manufacturing Property.

Must be well located for shipping, with side tracks. Prefer to locate in Illinois or Ohio. Address

SOPER & ROGERS, or 68 Lake street. Chicago.

Salesman with established trade amongst
Stove and Hardware dealers, mining stores,
of Eastern Pennsylvania, and whose time is
yardly taken up, deares representing a Tin
e. Stove, alining Supply or other house in
nection with his present line; has traveled for
ladelphia houses and is well posted; could
the his headquarters or manage an agency at
desired point.

"D. E." " D, E.," diress Scranton, Pa.

### Wanted.

practical man, with capital, to take general rge of a Car Manufacturing Company in active peration. Address D. T. PARKER,

Anniston, Alabama. ACHINIST with experience in Mechanical Draw-ing, Fattern Making and Management of Shop Men, and some knowledge of Mechanical Ensi-ing, wants a situation. Manufacture of special-irexperimental machinery preferred. direas "TUHAL CAIN," Uffice of The Iron Age, 65, Meade St., New York.

where of The Iron Age, 83 heade st., New York.

\*\*Reprisenced Charcoai Blast Furnase Manaser,
who has made the modern way of working a spestudy (with Eastern, Western and foreign ores)
less an engagement. Understands furnice consection in all its octails. No objection to engage
etter business. Highest references. Address

"FIG IRON,"

te of The Iron Age, 83 Reade st., New York

ANTED Ap. One Mill for subjection to engage

ANTED Ap. One Mill for subjection to the consection of the Iron Age, 83 Reade st., New York

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WANTED.-An Ore Mill for pulverizing ore for fix; with or without engine attached ize, maker and price BELLEFONTE IRON & NAIL CO., Limited,

Bellefonte, Pa.

# Trade Report.

### British Iron and Metal Markets.

[Special Cable Dispatch to The Iron Age.] LONDON, WEDNESDAY, January 21, 1885. Scotch Pig.-The market is unchanged. makers' brands as follows :

we quote ma	LEGI	S Dian	UED	ea	-01	-		-	100	,	Ψ.	19							
Coltness, along	rside	, Glasgo	W.	×									À					.55	5/
Langloan,	6.6	6.6							٠				۰		,			56	3/
Gartsherrie,	6.5	6.6		٠														. 52	3/
Summerlee,	6.6	6.6		۰														52	2/
Carnbroe,	6.6	8.6																49	1/
Glengarnock,	66	Ardross	an.	۰					٠	0								48	1/
Eglinton,	6.6	6.6																48	3/
Dalmellington,	0.6	4.6												0				47	1
Shotts,	6.6	at Lei	th.						٠								. ,	58	3/
Lighterage fr	rom	Ardros	san	ı	ti	0	G	1	BJ	36	Ŗ(	)1	W		į	ø	1	1/	9
ton.																			

Cleveland Pig .- The market is irregular. We continue quotations, f.o.b. shipping ports :

Bessemer Pig-Is unchanged. W. C.

Hematites are quoted 44/@ 44/6 for mixed lots, Nos. 1, 2 and 3, equal portions, f.o.b. shipping ports.

rregular. We quote at works:

		£	B.	d	. 4	1	9.	d.
Staff. Ord	I. Marked Bars	2	10	0	0			
8.6	Medium "	6	0	0	0	6	10	0
66	Common "	5	10	0	0	5	15	0
Hoops, 20	W. G. and over.				-			
66 Cc	mmon Best	6	15	0	0			
44 Mg	edium	6	5	0	0	6	10	0
16 Co	mmon	6	0	0	0	6	7	6
Sheets, 20	W. G. and under.				-			
	dinary Best	7	15	0	0	8	5	0
	nimon		75					

Weish Bars...... 4 17 6 @ 5 2 6 Steel Rails-Are unchanged. We quote £4. 15/, f.o.b. shipping ports.

Old Rails-Are unchanged. We quote Old D. H's, c.i.f. New York, £3 @ £3. 5/.

Scrap-Is unchanged. Heavy Wrought is quoted £2. 10/ @ £2. 12/6, c.i.f. New Copper.-The market is a little steadier.

We quote Best Selected, £53. 10/@ £54. 10/, and Chili Bars, £49. 5/@ £49. 15/.

Tin-Is a little steadier. Straits Ingots, spot, £76 @ £76. 10/, and futures, £76. 10/@

Tin Plates-Are irregular. We quote : Tin Plates, 10x14, 1st qual. Charcoal....19/6 @ 21/6 " 9d " " ... 18/6 @ 19/
" 1st " Coke... ... 17/6 @ 18/
" 2d " " ... ... 18/6 @ 14/6 ... .... 13/6 @ 14/6

Spelter.-The market is not so steady. We quote Ordinary, at shipping ports, £13. 17/6 @ £14.

Lead .- The market is quiet. We quote Common English Pig, £11. 2/6 @ £11. 5/. Freights.-Steam from Glasgow to New York, 1/6.

### Financial.

Office of The Iron Age, WEDNESDAY EVENING, January 21, 1885.

The past week has been an eventful one, tending seriously to unsettle that feeling of confidence which has been gradually strengthening of late, and which must necessarily precede a general and established return of business prosperity. The announcement on Thursday of the suspension of Two very valuable patents and complete sets of patterns are offered either for sale or on covalty—one an exclusive monopoly just being introduced, is werth from \$15,000 to \$20.000 yearly to parry with means to push. Loss by fire compets the offer. A rare chance for organizing a stock company. Full particulars by addressing the form \$40.000 to \$10.000 former a Pittsburgh dispatch says that their liabilities, as shown in a statement to cred-The undersigned wish to purchase property for Foundry business, with not less than two arrest ground, in a city of at least 10,000 inhabitants.

The undersigned wish to purchase property for Foundry business, with not less than two arrest for. Despite this untoward circumstance, there are sanguine hopes that the iron inchandise were \$6,234,913, of which \$3,967. dustry will soon get into a better shape cannot be denied, however, that the industrial situation thus far fails to realize the fair promises made at the beginning of the year. The improvement looked for seems to be in the direction of lower wages, and this means continued trouble and agitation until the relations between manufacturers and their employees shall have become established on an equitable basis, and under changed conditions as to the value of labor and its products. In Tennessee, according to latest advices, the industrial outlook is decidedly brighter, and more cheerful accounts come from Ohio.

The Stock Exchange market has been irregular during the week and generally lower. Two important failures on Thursday, in Pittsburgh and New York, had com paratively little effect, it appearing that the causes were circumscribed and local, rather than a product of general business derangement. Disquieting rumors, most of them lacking any basis of truth, were the principal source of weakness. On Thursday the coal shares were notably weak, on the reported refusal of the Pennsylvania Railraid Company to co-operate with others in the Anthracite trade. They were also affected by the announcement that Reading New York Iron Market. had made important concessions to iron fur-

pressed by news that the schedule rates in east-bound freight were no longer regarded. On Tuesday there was some improvement. To-day there were no new features aside board and the West. Quotations are as follows for the leading stocks: St. Paul, 731/8; Northwestern, 89½; Lackawanna, 84¾; New York Central, 86; Missouri Pacific, 93; Louisville, 24; Western Union, 573/8; that the supply from that source is not suffi-Northern Pacific preferred, 37%; Union Pacific, 49; Lake Shore, 60¼; Central Pacific, 32¾; Kansas and Texas, 1578; Rock Island, 1071/8.

United States hands along the College

United States bonds closed as	TOHOM	26.5
U. S. 3 per cents	Bid. 10116	Asked.
U. S. 41/68, 1891, coupon U. S. 48, 1907, coupon	11254 12134	11276 12176
U. S. Currency 6s, 1895	125	-
U. S. Currency 68, 1896 U. S. Currency 68, 1897	127	_
U. S. Currency 68, 1898 U. S. Currency 68, 1899	131 133	
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In the general market prices have shown ....87/6 more strength under the shock of heavy failures than would have seemed possible, especially in view of fresh troubles among railroad managers and the now almost certain disruption of the so-called "coal combina-On the Produce Exchange wheat suddenly dropped 11/4¢, and on the Petroleum Manufactured Iron.—The market is Exchange and Stock Board the weakening effect was also visible. Subsequent sales show a further decline, with sales of May at 961/4 @ 973/8¢, against 991/2¢ on Thursday. Cotton futures were lower, but afterward recovered a part of the decline. In dry sulted from the presence of numerous buyers from interior markets. Compared with the \$16 @ \$17. lowest prices of the last two months, there has been a small advance. The speculative markets during the week were active and irregular, but without radical changes compared with one week ago, and actual transactions were mcderate. The latter is especially true of provisions. For the current give strong hopes that the spring will see meat fall with other food.

> dition to the reserves, there being a gain of tenders, the surplus now standing at the extraordinary sum of \$51,148,775, against \$17. 284,225 at the same time last year; the loans are \$815,800 less than the week before. In the money market there is a firmer tone, owing to a better demand for commercial paper. We quote 60 to 90 days' indorsed bills receivable, 4 % @ 5 %; four months' acceptances, 41/2 @ 51/4. The supply of funds, however, seems to increase rather than di-minish. The posted rates for bankers' sterling were advanced to \$4.83 for 60-day and \$4.87 for sight. The market is firm. The Clearing House returns from leading cities throughout the United States are, as a whole, unfavorable, showing a decrease of 28 % compared with the corresponding week last year, against 25 % noted in the previous. Outside of New York the decrease was 7 %. Baltimore shows an increase of 45 %; Kansas City, 30 %; Memphis, 21 %; Milwaukee, 23 %, while Lowell, Columbus and Boston show small gains; Philadelphia falls off 23 %; Pittsburgh, 40 %; Cincinnati, 12 %, and St. Louis, 9 %. The number of business failures reported are slightly decreased, but is still remarkably heavy in the

Southern, Western and Middle States. The imports of foreign merchandise at 458 represents general merchandise and the remainder dry goods. Since January 1 they aggregate \$22,495,197, compared with \$26, 215,742, for the corresponding week of 1884.

The exhibit of the export trade of this port during the week is quite encouraging, the total shipments amounting to \$7,669,474, against \$5,955,765 same week last year. From January 1 up to date the comparison is not less favorable, the total since January being \$22,098,147, against \$18,843,967 and \$20,932,122 for the corresponding period in 1884 and 1883 respectively. According to the Custom House report the imports of specie at this port during the past week were \$240,826, and the exports for the same time The latter included \$275,000 in Spanish gold for Havana.

A report obtained currency this week that \$500,000 in silver certificates were sold at a discount-which is preposterous. Bankers say the large certificates can always be paid out immediately in settlement of customs dues, and the smaller ones go at once into circulation in the course of ordinary pay-They are used everywhere, except at the Clearing House.

The market generally presents about the naces on its line of transportation. Some same conditions as those noted a week ago.

was strong at the close. On Satur-day the trunk line stocks were de-good, unless they result in decreased competition by the stoppage of embarrassed manufacturers.

American Pig .- A fair amount of business has been done during the week just from the growing probability of strife among closed. Buyers appear to be in need of railroad managers between the Atlantic sea-Orders received represent quite a wide range of territory, some coming from parts of New England, where Southern Irons have a substantial foothold, indicating either cient for all requirements, or else that local Irons are being given the preference for some classes of work. A better feeling seems to be slowly rising, which it is hoped will not be checked by the growth of a new crop of failures, concerning which there are naturally some apprehensions as a result of the recent crash at Pittsburgh. Our record of furnaces in and out of blast continues to show decreased production in the territory contiguous to this market. As compared with one year ago, there are 20 less furnaces in blast, with a falling off of 6400 tons in weekly capacity. As compared with a month ago, the falling off is two furnaces and 1520 tons in weekly capacity. These facts are shown in the following table, which refers to the condition of furnaces on the first of each month mentioned :

Total... ... 74 56 54 90,815 15,985 14.415 goods the close of the week reflects a much better feeling than was manifested at the Lehigh and North River Irons, at tidewater, opening, an improved business having re- as follows: No. 1 X Foundry, \$18 @ \$19; No. 2 X Foundry, \$17 @ \$18; Gray Forge,

Scotch Pig.-The imports of the past week only amounted to 50 tons, but it is expected that receipts will be heavier hereafter on account of deliveries previously negotiated which will soon mature. Demand is still very quiet, in view of the low price of cially true of provisions. For the current winter season the Cincinnati Price Current places packing at 6,390,000 hogs, against 5,400,000 last year. These figures, together with the steady growth of cattle receipts, which is a steady growth of cattle receipts, which is a steady grow to arrive, \$22 from yard; Langloan, \$21.50 to arrive, \$22 from yard; Carnbroe and The weekly statement of the Associated Glengarnock, \$19.50 to arrive, and \$20.50 Banks of this city shows a further heavy addition to the reserves, there being a gain of arrive; Dalmellington, \$19.50 to arrive; \$3,308,600 in specie and \$1,315,500 in legal Eglinton, \$19 to arrive; Clyde, \$19.50 to

> Bessemer Pig and Spiegelelsen .-Quotations are purely nominal in the absence of business, namely: Foreign Bessemer, \$19; 20 % Spiegeleisen, \$26; 30 % Spiegelisen, \$30.

Bar Iron.-The market has been exceptionally dull for the past week, and the agents of some mills are now paying attention to the retail trade, offering to make de liveries of small lots at the same price as carload lots. This interferes with the store trade, which is consequently quieter than ever. Some fair-sized orders are in sight, and are the subject of active competition among sellers. It is almost impossible to quote prices with exactness, owing to the different terms being offered, but as nearly as possible the following quotations represent the range of the market : Best Refined, at mill, 1.65¢ @ 2¢; from store, 1.9¢ @ 2¢; Common Iron, at mill, 1.45¢ @ 1.7¢; is not being strictly adhered to.

Structural and Shaped Iron.-Busingnt, being \$2,535,104 below that of the previous week. The receipts of general merchandise were \$6,234,913, of which \$3,967.

458 represents general merchandise and the Channels, on dock, 3.5¢. For large lots concessions are made.

Iron Plates are sold at about the follow- ket, and sold at \$3.55. At the close the quo-Common or Tank, 2.2¢ @ ing prices : 2.3¢; Refined, 21/2¢; Shell, 21/4; Flange, lots of Steel Plates the quotations are as follows: Ship, 21/4 @ 3¢ at mill; Tank, 3¢ @ 31/2¢ on dock; Boiler, 31/2¢ @ 51/2¢. sheet Iron.-The movement in this line

is very slight, the season not being expected to open till February. Quotations will be found in our list of New York Wholesale Metal Prices.

Merchant Steel .- Business continues inactive. Nominal prices are still as follows : American Tool Steel, 9¢@91/4; Tool Steel of special grades and finer qualities, 12¢@ 20¢; Crucible Machinery, 5¢ @ 6¢; Spring and Tire, 3¢ @ 3¼¢; Open-Hearth and Bessemer Machinery, 21/4 @ 3#: English Tool, 141/4 @ 156.

Steel Rails .- The only transaction reported is a sale of 3200 tons to a Southern railroad by an Eastern Steel company, on private terms." Some few additional inquiries are in the market, but they amount to very little in the aggregate, except from naces on its line of transportation. Some same conditions as those noted a week ago. new roads which would willingly exchange disturbance resulted from the default of The recent Pittsburgh business troubles bonds for Rails. The Steel companies, how-Central Iowa in the payment of coupons on seem to have had but a slight effect here, ever, do not desire either to engage in bank-

to a general advance, and the tone heavy failure could not hurt it, though, of \$28 at mill, but this is now simply a basis for

Steel Wire Rods .- There is a moderate demand for small lots, with an occasional sale of a round lot of a special quality. Ordinary Foreign Rods are quoted at \$44 for shipment, but it is possible that this price can be shaded.

Steel Blooms.-A demand for Blooms for special purposes has been a feature of recent occurrences in the trade. One establishment has purchased 1000 tons of Foreign Crucible Blooms, which is estimated to be a year's supply. Evidently, prices of some articles are considered low enough by purchasers.

Old Rails.-The market is stagnant, no business having been reported except a sale of a small lot at \$16. We quote \$16 @ \$17, according to the position of buyer and seller.

Scrap Iron.-The only transaction coming to our knowledge is a sale of 200 tons at \$17.50 from yard. No. I Wrought from yard is quoted at \$17.50 @ \$18, but sellers are anxious for bids in some cases.

Old Wheels.—A sale of 50 tons at \$16.75 is reported. Holders now ask \$17.

We are reported the following sales as having occurred on the floor of the Metal Ex change since our last issue :

MONDAY, January 19. 

The Copper rules of the Exchange are now being revised, and a new set will soon be laid before the organization for adoption.

### Metal Market.

Copper.-Beyond some sales of Baltimore at :03/¢ nothing has transpired in other brands that we hear of. Lake Superior is very stiff at 11 1/2 \$ @ 12\$, nominally. The London market has followed a rising tendency with Chili Bars till this morning. The daily quotations thereof were : January 14, £48. 10/; 15, £48. 12/6; 16, £48. 12/6; 17, £48. 17/6; 19, £49. 5/; 20, £49. 10/, and this morning, £49. 5/. Best Selected is steady at £54. Manufactures may be nominally quoted: Bottoms, 20¢; Braziers, 19¢ @ 25¢; Sheathing, 17¢, and Bolt Copper, 18¢. From London we are cabled as follows:
"Market a little steadier. Best Selected, £53 @ £54. 10, and Chili Bars £49. 5/ @ £49. 15/."

Tin.-London has gone on improving, and this morning cables £76. 5/, and three months, yesterday £76. 15/, were this morning £76. 17/6. Our market has fully responded to the advance and improved to 17¢, large lines Straits; in a jobbing way 17% may be obtained. General opinion favors a further improvement. Mr. Charles Nordhaus, East India agent, 13 Cedar street, New York, furnishes us the valuable statis tics below:

Total..... Consumption December..... Total .. 2,600 700 January 1, 1885, visible supply..... 2,400

We receive from London this afternoon the following: Tin is a little steadier. Straits Ingots, spot, £76@ 76. 10/, and futures £76. 10/ @ £77. 5/. Tin Plates.—The jobbing demand continues light, and there is no from store, 1.7¢@ 1.9¢. The list of extras change; we quote at the close, large lines, ordinary brands, P box : Charcoal Bright, \$5 @ \$5.50; do. Ternes, \$4.60 @ \$4.75; ness is quiet, and at the moment but little new work is offering, though some projects are slowly ripening which will eventually require material in this line. Coke Tin, \$4.45 @ \$4.50, and do. Ternes, new work is offering, though some projects are slowly ripening which will to remark that fruit packers have begun to eventually require material in this line. Quotations for small lots are nominally as coal Bright, 16/@ 18/, and Coke do., 14/60

rise in Lead has failed, but in the meantime Plates .- A moderate business in small it was availed of by other parties in order lots continues to be the condition of affairs still to sell 1000 tons at \$3.65, since when a in this branch of trade. Small lots of lot of 100 tons has been forced on the martation is \$3.60 @ \$3.65, nominally, for both Common Domestic and Corroding, without a 31/2¢; Extra Flange, 4¢ @ 41/4¢. For small decided tendency either way, but essentially weak. Soft Spanish, in London, stood this morning £10. 12/6. Manufactures are quoted as follows: Lead Pipe, 5 % # 1b; Sheet Lead, 634; Tin-Lined Lead Pipe, 15%, and Block-Tin Pipe, 40%, allowing in trade for Old Lead delivered in New York 30 2 1b. Shot: Drop, 6¢; Buck, 7¢; Chilled, 7¢. Shot in 5-lb bags, 1# 1 th extra. We receive from London the ensuing this afternoon: The market is quiet. English Pig, £11. 2/6. Spelter and Zinc.-The improvement

in Common Domestic Spelter is making headway, though slowly; we quote the same 41/4 at the close, and Silesia \$4.80, nominally. Bertha Refined is worth, as heretofore, 8¢. Sheet Zinc.—Domestic is worth 5¢ @ 5½¢, as to quantity. Silesian Spelter stood this morning in London at £14, and this afternoon we are telegraphed £13. 17/6 @ £14.

Antimony .- Hallett remains steady in London at £40. The market here has been moderately active only, and closes at 101/16 for Hallett, and 10 % for Cookson.

A cable dispatch from Paris, dated the 16th inst., says that the Anglo-French engineer commission has decided to give the Suez Canal a breadth of 220 feet and a depth HE ADVERTISERS, Pattern Maker and Moulder, which to meet with positions in their respective arms and moulder, which to meet with positions in their respective the first mortgage bonds. On Friday nearly though it is possible that time will develop furnish as east of references; have both need to give the whole list was lower, in consequence of mountant parties in the foundry business will find a depth of The from Age, 53 Reade street, New York.

Central Iowa in the payment of coupons on the first mortgage bonds. On Friday nearly though it is possible that time will develop ing or in railroad building, and new roads furnish as decided to give the whole list was lower, in consequence of general impression prevails that trade has for some time been so depressed that a for some time some time and s

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# Trade Report.

### Philadelphia.

Office of The Iron Age, 220 South Fourth St., PHILADELPHIA, January 20, 1885.

Pig Iron .- The events of the past week have not been favorable to an improvement in business, although it would be difficult to show that any direct injury has been sustained. Confidence has been shaken, however, and the feeling is undoubtedly less hopeful than it was a year ago. Pig Iron is not quotably lower than it was, but there is follows not the same uniformity that prevailed at that time, neither can sales be made to the same extent. Buyers are inclined to wait a while longer, with perhaps more fear than hope that it will be prudent for them to do so, and while such a feeling predominates it is hopeless to look for a better market. Nothing can be said or done to help matters, so that business is likely to drift along until something transpires to give the market a more definite character than it now has. Meanwhile, standard brands are held at firm quotations, although there is only a very moderate demand. Some irregularity prevails in outside brands, the tendency being to shade prices sooner than lose a sale It is very difficult-impossible, in fact-to state precisely what the market really is on this class of Iron. Price is one thing, delivery another, and quality still another. Sales have been made to a considerable extent of Alabama, Georgia and other Irons. from which it must be inferred that buyers consider them cheaper than Pennsylvania Irons or they would not take them in preference. The relative cheapness depends in a measure on the point of delivery, but, whatever the reason may be, the loss of so much business is becoming a serious matter to Pennsylvania companies. This competition may not be permanent, but it has come at a most unfortunate time, and looks as though it had come to stay. As an indica tion of values it may be said that good qualities of Southern Gray Forge are offered at \$15.50, with a probability that \$15 @ \$15.25 has been accepted for 1000-ton lots. Including Southern Irons, a very large amount of business has been done since the first of the year, so that a little dullness now should not be considered unusual. Standard brands, as already mentioned, are held at ures. Sales as follows: No. 1 Wrought steady prices-say, \$16, \$17 and \$18 for the three grades, delivered at tide. The leading \$14; Old Car Wheels, \$15; Old Steel Rails, furnaces are understood to be well sold up, \$14 @ \$14.50; Spiral Springs, \$14; Fish and are not pressing sales, although there are some who may shade a trifle on the lower Cast Scrap, \$13.50 @ \$14; do. Turnings grades. At all events, something less than \$9.50 @ \$10. \$16 and \$17 is said to have been accepted in recent transactions, but the circumstances were rather exceptional. On the whole, however, the market is barely steady; in from \$2.05 to \$2.10 for Iron, and \$2.15 @ \$2.20 Tubing, 11¢ \$2 foot, net; 5%-inch Oil-well many cases it is feverish and irregular, and for Steel. in others has shown a slight tendency to ward lower figures.

Foreign Iron.-The only transaction mentioned during the week was one of 1000 mentioned during the vice tons special brand of Bessemer, supposed to be at about \$20, Philadelphia. No demand for Spiegel or ordinary brands of Bessemer.

Muck Bars .- A very limited business at mill for good Bars, with lower figures possible on large lots.

Blooms .- No demand of importance quotations nominal, as follows: Charcoal @\$44; Scrap Blooms, \$35 @ \$36; Northern Ore Blooms, \$35.

Bar Iron.-The market continues in a very depressed condition and with nothing in sight to indicate the probability of early improvement. Large consumers are doing little or no business, so that their requirequirements are unusually limited. Prices are as unsatisfactory as the demand, although it might reasonably be expected that notoriously cheap sellers. Local manufacturers seem to have had no chance in competition with them, and, now that it is shown the prices recently accepted, a change for the better ought to be established. Meanwhile there is a disposition to wait the course of events, but the chances are that the extreme low figures of the past three months are not likely to be repeated unless some unexpected reduction can be made in cost of at 1.8¢, with still lower figures quoted by some country mills.

Plate and Tank Iron.-The demand is very limited, only small lots being called for, and orders of that class are by no means abundant. Consumption has fallen to a very low point. Shipbuilders, tank-builders, carbuilders and others of that class are doing almost nothing, so that it is almost impossible to pick up enough business to keep the mills at work. Prices are about as before, although on the chance of a good-sized order prices would doubtless be shaded a little sooner than risk the loss of a customer. In ordinary cases quotations are about as follows: Ordinary Plate Iron, 2¢; Tank, 2.1¢ @ 2.2¢; Shell, 2.5¢; Flange, 3.5¢; Fire-Box, 4.25¢; Steel Plates, Flange, 3.5¢ region report that there is little or no in-@ 3.75¢; Fire-Box, 4.25¢.

[Structural Iron.-There is very little tracts made. new business coming on the market, and the demand has been confined to small lots for

such a lack of confidence that new enterprises receive very little encouragement at

Sheet Iron .- The demand is about as good as can be expected, considering the eason and other discouraging circumstances. Prices are steady, however, although it is probable that concessions would be granted to buyers of large lots. For small lots of best quality Sheets prices are about as

1	A DATE OF THE PARTY OF THE PART	
	Best Refined, Nos. 26, 27 and 28	
1	Best Refined, Nos. 18 to 25 81	49
1	Common, 1/4¢ less than the above.	-
1	Best Bloom Sheets, Nos. 26 to 38 5.	54
1	Best Bloom Sheets, Nos. 22 to 25 45	60
1	Best Bloom Sheets, Nos. 16 to 21 4	
1	Blue Annealed	
	Best Bloom, Galvanized, discount 5714	6 9
1	Second quality, discount	ð 9
	Common, discount 623	
4		

Wrought-Iron Pipe .- As in other departments, a very depressed feeling prevails, and only a small business has been done during the past week. Discounts are unchanged, and in ordinary cases about as follows: Butt-Welded Black Pipe, 45 %; Butt-Welded Galvanized, 30 @ 35%; Lap-Welded Black, 60 @ 65 %; Galvanized, 40 @ 45 %; Boiler Tubes, 57 1/2 @ 60 %.

Steel Rails.—The demand is not large, and, on the whole, the position remains about as stated in last week's report. Large buyers are holding off in anticipation of lower figures, while manufacturers pursue the even tenor of their way at last week's prices, say, \$28 @ \$28.50 at mill. It is not unlikely that concessions could be had on firm offers for large lots, but at \$26 @ \$26.50, the prices named by buyers, there is no immediate prospect of business being done. Sales chiefly in small lots at the figures above named

Old Rails.—The demand and supply are equally light, so that only a very limited ousiness has been done. About \$17.50, Philadelphia, would be a fair quotation, al though latest sales were at \$18.50 and \$19, delivered at points in the interior

Old Material.-It is difficult to quote exact prices, as they vary according to quality and delivery. As a rule, seaboard prices are quoted, but in many cases deliveries are made in the interior at about the same fig-Scrap, \$17.50 @ \$18; Turnings do., \$13 @ Plates, 200 tons, f.o.b. cars Hoboken, \$21;

Nails .- Prices are a shade better, although there is no special increase in the demand. Standard makes are quoted at

### Pittsburgh.

Office of The Iron Age, 77 Fourth Avenue, Pritsburgh, Pa., January 20, 1885.

The great event of the past week was the suspension of the well-known Iron firm of Oliver Bros. & Phillips, which for the past has been done on the basis of \$27 @ \$27.50 few years has been regarded as one of the most active and energetic Iron firms in the country. At the meeting of creditors to-day, the result of which is not known at this writing, a statement will no doubt be sub-Blooms at \$52 @ \$53; Run-out Anthracite, \$43 mitted that will show the true condition of affairs. In the meantime we refrain from comments upon the imperfect information to The troubles of Oliver Bros. & Phillips has, as might be expected, caused a feeling of distrust, and has been the means of starting rumors affecting the standing of other firms which it is believed have no foundation.

In regard to the labor situation nothing remarkable has developed during the week; reductions are still quite numerous, and, as a the troubles of the Pittsburgh firm would rule, the men are submitting, on the prinlead to some improvement. They have been ciple that a half loaf is better than none The Oliver Bros. & Phillips trouble has produced one good effect-it has opened the eyes of the ironworkers to the fact that the that business cannot be successfully done at | iron business is very bad. The latter, while conceding that the business was not good. were strongly impressed with the belief that it had been greatly exaggerated by the manufacturers with a view to getting down the cost of labor. Unless there is a very decided change in the iron business for the better in the meantime, the manufacturers production. Best Refined Bars are quoted are determined the scale with the Amalgamated Association, which expires June 1st, will have to be materially reduced for the year following, and, while the Amalgamated managers do not say much, it is apparent that they have about made up their minds to accept a reduction in the scale, although they say that it is rather early to discuss the matter.

Iron Ore -The Ore trade, like every other department of the Iron trade, continues very dull, and the outlook is by no means promising for an early business. Consumers are expecting a considerable reduction in the price of Lake Ore this year, as compared with that of 1884, and there is not much doubt but what their expectations will be realized. Advices from the Lake Ore quiries, and thus far there have been no con-

Pig Iron.-The situation remains substantially as reported a week ago; trade con-

continue to adhere closely to the hand-tomouth policy. Prices are weak, and within present. Some improvement is looked for the past two weeks have gone off from 25¢ toward spring, but in the meantime the out- to 50¢ \$\emptyset\$ ton. We can report sales, mostly, look is anything but cheerful. Prices are as intimated, in small lots, at \$15.50, cash, about as last quoted, viz: 2.1¢ for Angles, for good Neutral Mill Irons, and \$15.75 @ 2.2¢ @ 2.25¢ for Bridge Plate, 2.6¢ for T's \$16, four months; White Iron, at \$14, cash and 3.5¢ for Beams and Channels, subject to the usual discount on large lots.

Sheet Iron.—The demand is about as \$22.50, cash; for No. 1, Warm Blast, a lot of close Missouri Hot sold at \$17.50, cash; Bessemer Iron sold at \$17.85 @ \$18, four months. The best city brands of Neutral Mill strictly adhering to the prices adopted, and can now be had at \$15.50, cash, to \$16, four months; we do not know that any of our city furnaces would care to contract for future delivery at the prices quoted, nor are consumers disposed to buy except as their immediate necessities require.

Muck Bar .- There have been no sales reported for some time, in the abscence of which we continue to quote nominally at \$27,50 @ \$28, cash.

Manufactured Iron.-Trade in all branches of Finished Iron continues very dull. But very few of the mills are running full, some are still standing idle, and prices are weak and irregular. We continue to quote on a basis of 1.65¢ @ 1.75¢, 60 days, % off for Bars—that is, for Iron of first quality. It is said that orders are being placed elsewhere on a lower basis than the one we have quoted, but a good quality cannot be bought here below our quotations.

Nails .- There is not much to note of an important character. Trade continues very ommence to come forward more freely next upward, and 5¢ @ 10¢ P keg additional in to small trade. a jobbing way. Private advices from Chicago report that an advance of 15¢ P keg has been made in that market. Steel Nails are still being quoted 5¢ @ 10¢ P keg above Iron Nails, but when brought in close competition it is claimed that they can be bought at the price of Iron Nails. There is a good deal of competition between the makers of Steel and Iron Nails; the former are making a strong effort to drive the Iron Nails out of the market, which is being resisted by the latter.

Wrought-Iron Pipe.—The Pipe trade ontinues dull, as it nearly always is at this season of the year, and no particular activity is expected for some weeks to come. It is probable there will be additional contracts for Pipe for natural-gas companies on the market next month, for the general Pipe trade will not likely amount to much before March. Prices remain unchanged. Discounts on Black Butt-Welded Pipe, 45 @ 45 and 5 %; on Galvanized do., 35 %; on Black Lap-Welded Pipe, 65%; on Galvanized do., 45 @ 45 and 5 %. Selected Pipe or Pipe cut to specified lengths, discount 5 % Casing, 37¢ @ 40¢ P foot, net.

Steel.-The Merchant Steel trade con. tinues much the same as noted for some time past : demand light, while prices are weak, but without quotable change. Refined Cast Steel, 94 ¢ @ 10¢; Crucible Machinery, 5¢ @ 5½\$; Open-Hearth and Bessemer do., 3\$. Steel Nail Slabs are still quoted at \$30, free on cars at works, but some sales have been made as low as \$29 @ \$29.50. The latter is rock bottom, so it is said by those who are

in a position to speak authoritatively. Steel Ralls.—There is nothing doing here. The Edgar Thomson Works are still standing idle, and are not likely to be started up until the market improves. It is claimed that Rails ought to bring \$30 on cars in Pittsburgh in order to afford a fair margin for profit, which is from \$2 to \$3 ? ton more than can be obtained. Sales have been made by mills at other points at \$29, delivered at Chicago, which would be equal to \$27.50 in Pittsburgh.

Old Rails.-The last sale of Old Iron Rails was at \$ 9, which appears to be regarded as the ruling price. We can report

Railway Track Supplies-There is some inquiry, but prices are no better and not likely to be soon. We continue to quote Spikes at 2¢, 30 days; Splice Bars, 1.6¢ @ 1.7#; Track Bolts, 21/4 @ 21/2#.

Crop Ends.—Since the stoppage of the Edgar Thomson Rail Mill, Steel Rail Ends have not been so plentiful, but with a light inquiry prices remain as last quoted, \$18 teel Bloom Ends, \$17 @ \$17.50.

Scrap .- The demand for all kinds of Scrap continues light, but prices, although weak, remain about as last quoted. No. 1 Wrought Scrap, \$16 @ \$17, net ton; Old Car Axles, \$24 @ \$25; Wrought Turnings, \$13 @ \$14; Old Car Wheels, \$15 @ \$16, gross; Cast Borings, \$11, gross.

Window Glass-There has been nothing mportant developed recently; business dull, as it nearly always is this month, and the outlook for spring trade is not particularly bright. Discounts remain unchanged, as follows: Single Strength, in car lots, 70 and 5 \$: Double Strength, 70 and 10 and 5 \$.

Coke.-Blast Furnace Coke continues very dull but there has been no recent change in price.

### Chicago.

Office of The Iron Age, 36 and 38 Clark St., Cor. Lake St., Chicago, January 19, 1865.

Hardware.-There has been an increased immediate delivery. There is a moderate tinues about as dull as ever. Sales are amount of business in prospect, but there is nearly all small, indicating that consumers Orders that were placed, however, were not definite settlement of price. Numerous in-

classes of goods. Consumption in the retail trade has unquestionably been light, and considerable business has been prevented by the several snow storms and interruption of travel. The market in a general way is quiet but firm, with general expectations of their special meetings and resolving upon fined brands from store plans and adopting prices for the spring trade. They start out with the intention of say that concessions from these prices shall not be made with the liberality heretofore displayed by salesmen.

Barb Wire.-Market inactive. Sales, if anything, below the previous week in carload lots, while inquiries have greatly increased. The combination which was formed by manufacturers in St. Louis and vicinity some time ago has fallen through because several parties did not put up their certified checks, which again opens the question of the stability of price. There are plenty of merchants who are ready to place orders for Wire and will do so just as soon as they can rely upon the fact that no lower prices will be made. Manufacturers in Chicago and tributary territory, so far as we can learn, have made no effort to form combination prices, and the market is, therefore, at pres ent weak and somewhat irregular. Nearly all the makers of a particular class of Wire have adopted their own price, regardless of others, and endeavor to sell the Wire upon quiet, but it is expected that orders will its merits at the figures, which vary according to the position of the respective mills. month. Prices remain unchanged at \$2, 60 In the absence of a settled price, we continue days, 2 % off for cash, in carload lots and to quote Galvanized, 5¢; Painted, 1¢ less

Nails.-The market has undergone oticeable change during the week past Makers, sales agents and jobbers who dispose of nearly the entire product of mills in this market have together advanced the price on Nails to \$2.10, 2 %, 60 days, as bottom price on carload lots. Orders at \$2.05 former price-have been uniformly refused by all regular dealers, and all efforts to break the combination have failed. The Calumet Mill refused an order for 10,000 kegs which was tendered at a fraction below the adopted price, while numerous smaller lots were declined by other houses. St. Louis jobbers have not yet made any change, nor, from reliable information, do they contemplate such a movement at present. One or two other jobbing points in the West are figuring on following Chicago jobbers in this matter, but are holding off on account of the undeveloped strength of the demand. From store prices advanced to \$2.15 in small lots, and all dealers assert that they will not depart from this price.

Ore. - Representatives of the various Lake Superior Ore companies are complaining seriously of the condition of the Ore mar-Furnacemen are making no contracts and the business is conducted on the small lot principle, buying being chiefly from week to week. Prices are irregular and weak, with no prospect of the matter being definitely settled for some time to come

Pig Iron.-The market during the week has been considerably agitated ever the failure of Oliver Bros. & Phillips. The small quantity of Iron in most of the furnace vards somewhat allays the fear that it will be the cause of forcing any large blocks upon the market. On Lake Superior Charcoal and Coke Irons the market continues to be regular and steady. While no contracts of importance are being made, there is nevertheless a good trade for the season in carload lots. In Southern Foundry and Mill Irons the market has weakened in the last week. The cessions if there is a possibility of obtaining demand has not been so strong for Foundry Iron as several weeks ago, but the inducements offered on Mill Iron have been productive of three or four good-sized orders in the close of the month. We continue to addition to the small trade in carload lots, make the following quotations as jobbers' price which has been pretty steady. Two of the from store: Juniata, 57 % discount. Charsales of Old Steel Rails, mixed lots, at \$16. sales that have come to notice aggregate coal, 60 % discount, and Refined, 62 1/2 % disabout 21,000 tons, delivered at Cincinnati and Louisville, at \$13.25 for two of the brands and \$14 for the others, equal to \$15 lots or such quantities as would form a fair @ \$15.75, Chicago. On another lot of 700 basis for a quotation. There is a dribbling tons, delivered at Michigan City, definite figures could not be obtained, but are refrom 50¢ to \$1 a ton, according to The best brand of No. 2 would two brands on which this price would be refused. There are certainly a number of \$2.80 @ \$2.90; Nos. 22 and 24, \$2.80 other brands on which it could be discounted. \$2.90; Nos. 25 and 26, \$2.90 @ \$3; No. 27 On Southern Mill Iron \$15 is said to be a fair \$3 @ \$3.10. quotation for Chicago delivery. Southern No. I has not been marketed lately, and is said to be steady at quotations, though the difference between one and two is greater than usual. We quote carload lots, four months, as follows: Lake Superior Charcoal, Nos. 1, 2 and 3, \$27.50; Lake Superior Coke, \$20 @ \$21; Cinder, mixed, \$19 @ \$20; Lake Superior and Ohio, mixed. \$20.50 @ \$21; Ohio Standard Black Band, No. 1, at \$21; Southern, No. 1 at \$18.50; No. 2 at \$17; Silvery Soft at \$17.50 @ \$19.50.

Scotch Iron.-No sales to report. We continue our quotations on Summerlee at \$25 cash, from yard.

the week has not been very great. Buyers less, which is about the cost of shipping be

very large, but embraced in general all quiries continue to be made for delivery later in the season on the regular grade of Steel. Makers of specialties report a pretty fair trade and an encouraging outlook for the future. The local demand from manufacturers and merchants has been a trifle better than the week before, but in other good trade. Wholesale jobbers in Shelf respects the market is unchanged. We conand Heavy Hardware have been holding tinue the following quotations for Best Re-

•	and dramab from Boote;		
5		Per pound.	
F	Best Refined Cast Tool Steel	814 00 9140	
1	Crucible Cast Machinery Steel	516 @ 6 0	
l	Open-Hearth Machinery	814 @ 8160	
1	Bessemer Machinery	234 @ 3 0	
	Copen men in Spring Steel.	8 @ 31/10	
3	Toe-Calk Steel	814 @ 81/20 494 @ 5	
	Fire-Box and Boiler Steel		
	Sled Shoe Steel, plain	2.35 @ 2.40	
	" curved	2.5 @ 2.60	
	Syndicate Steel	6 @ 6340	

Steel Rails .- The market remains in about the same position as it was last week Makers are not striving very hard to obtain orders, and inquiries come in rather slowly Mills continue to quote \$29 @ \$30 as their lowest price. Several lots, amounting to about 5000 tons, are reported for the week's

Old Rails. - Market less active. Numer. ous holders having Rails to sell decline to accept the price offered at mill, while others meet the buyer's price. During the week one lot of 1000 tons was bought at \$17, Milwaukee delivery. On another sale of about 10,000 tons \$17.50 was realized, the difference in price being made in consideration of the fact that it was a trade transaction. Dealers continue to ask \$18, cash, shading this figure according to the financial circumstances of sellers.

Structural Iron. - Business is rather quiet. Building operations have been somewhat affected during the week by the recent failure, and investors of capital are inclined to be more slow in placing contracts than they were 10 days ago. The number of esti-mates which have been on the market for Structural Iron for several weeks has been stayed, and contracts which it was supposed would be awarded by this time have been deferred until later in the month. It is not presumed that this condition of affairs will continue any length of time. We quote: Beams, \$3.60; Channels, \$3.60; T Iron, \$3: Angle Iron, \$2.50; Flitch Plates, \$2.50; Frieze Plates, \$2.70; 1/4 @ 1/2 is added for delivery from stock.

Bar Iron.-Quite a number of good-sized orders were placed during the early part of the week, when the market presented a very favorable appearance. The general impres sion among makers and dealers is that the misfortune of Oliver Bros. & Phillips is more likely to have a tendency to improve the market than depress it. Their assignment is given as evidence that Iron has been sold at less than cost, and that this state of affairs cannot exist without inevitable ruin. Whether it will improve the condition of trade or not remains to be seen. It is certain that it has not thus far created an unfavorable impression in the trade. We quote at \$1.80 rates on Best Refined New Puddled Iron from store. Mill price in carload lots, \$1.70 @ \$1.75, according to specifications. For common Iron \$1.50, f.o.b., is regarded as a fair quotation from mill, and from store.

Norway Bars .- We continue to quote Norway Bars to local trade at \$4 rates, and to merchant trade in carload lots at \$3.75. The latter price prevails more extensively outside of the city, where strong competition exists between several of the Eastern houses

Galvanized Iron .- Market quiet and uying slow and irregular. The demand is exceedingly light, and when an opportunity offers to place an order manufacturers who have stocks do not hesitate to make cona contract. In a general way concession seem to be growing more prevalent, and lower prices are predicted by jobbers before count from list.

Black Sheets .- No demand in carload trade in small lots to dealers and consumers for Stove-Pipe and a few other makes, but ported to be in the neighborhood of the market is generally regarded as dull and \$14.50. No. 2 Foundry has also declined prices very weak. In the absence of further information we renew the following quotations on Best Refined grades from mmand about \$17, while there are one or store: Nos. 8 to 14 at \$2.50 @ \$2.60; Nos. 15 to 17 at \$2.80 @ \$2.90; Nos. 18 to 20 at

Old Wheels.-There are several large lots of Old Wheels in the market which have been offered without obtaining a purchaser. Holders are now asking \$16 @ \$16.25. Buyers have receded in price in almost the same proportion, and foundrymen who were willing to pay \$15 a week ago have fallen off to \$14.50, while on choice lots \$15 might be

Scrap Iron.-Prices on Scrap Iron at mill have gone off about 50¢ P ton during the past week. No. 1 Mill Scrap, Milwaukee delivery, is quoted \$14 @ \$14.50, and No. at \$9 @ \$9.50. The quantity of Scrap obtained at these prices comes largely from the Northwest, and, if shipped from that point Merchant Steel .- The demand during to Chicago, would be worth about 50¢ a ton

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from mills in Chicago for Select Scrap, but the quantity in demand is so small that a price could not be arrived at with any certainty. No. 1 Forge is firmer and might be fairly quoted at \$17 @ \$17.50, consumption being considerably less than for Mill Scrap. As dealers' purchasing price we quote the following: No. 1 Wrought Scrap, net ton, \$13.50 @ \$14; Cast Scrap, P net ton, \$11.50 @ \$12; No. 1 Stove-Plate Scrap, net ton, \$8; Wrought Turnings, P ton \$10; Cast-Iron Borings, \$6; Old Plow Steel, \$9; Tool Steel, \$\ ton, \$15; Locomotive Steel Tire, P net ton, \$12; Buggy Springs, P net ton, \$14; Malleable Scrap, \$6.

EVERETT & Post, 156 Lake street, Chicago, report to us as follows, under date of January 19, 1885 : Pig Lead.—The position of Pig Lead during the past week has been one of quietness as to the West, with values nominally \$3.50 @ \$3.55. We hear of but few transactions for local consumption, although quite large sales are reported in New York for Eastern consumption. The quantity of Lead offering is not large, yet ample to supply present requirements. Manufacturers here are still holding off, waiting for developments in trade.

### Chattanooga.

Office of The Iron Age, Carter and Ninth Sts., ECHATTANOGA, January 19, 1885.

The heavy and continuous rains of the past week have caused a large falling off in local trade, but they have caused a big rise in our river, which has brought in immense quantities of logs and lumber, and our lumbermen and mills are active, and a few large contracts have been made to go to distant points. The steamboat business is booming, and large quantities of produce from Eastern Tennessee and Northern Ala-

change, but are well maintained. The Citico Furnace will probably commence turning out Iron on Monday, which will add to the product of the district about 100 tons per day. An offer of this make for 10,000 tons of Gray Forge has been made at present ruling prices, but has been declined, the owners being of the opinion that better prices will rule as the spring advances. A further reduction on freight to New York, Boston, Philadelphia and Baltimore has been made, and it is now \$3.75 % ton to these points. This has had the effect of stimulating inquiries from these points, and some sales have been made at \$15.50, deliv-

the farmers to begin to lay in their stock of utensils for the spring work. This interest has increased very materially during the present winter by numbers of Northern farmers purchasing tracts of land in this

all kinds is, however, neglected, with the Sheet than usual at this season. Prices are exception perhaps of Old Wheels, of which firm. Steel.—Agricultural Steels and Shapes some sales have been made at \$12.50 @ are extremely active. Some makers have

### Cincinnati.

JANUARY 19, 1885 .- Pig Iron. -The slight increase in inquiry and small orders give a little better tone to business, but prices remain flat. The large production in Virginia, Tennessee and Alabama enables the brokers to continue offering any amount of Foundry grades for scattered deliveries and at prices that secure the orders to the extent of the needs for the kinds. The Hanging Rock brands are held firmly at prices slightly higher than the Southern, but it is reported that they are being liberally taken for tempering a mix. Quotations:

CHARCOAL FOUNDRY.

Hanging	Bock.	No.	1		* *	 \$21.00	0	\$21.50
Hanging	Rock.	No.	2			 19.50	0	20,50
Tennesse						19.00		19.25
Tennesse	e and	Alab	ama.	No.	12.	 17.50	0	18.00

	COKE FOUNDRY.		
	Ohio and Pennsylvania, No. 1 Ohio and Pennsylvania, No. 2 Virginia, Alabama and Tennessee,	19.00 @ 17.00 @	19,50 18,00
	No. 1	17.00 @	18.00
	No. 2	15.50 @	16.00
	SILVER-GRAY SOFTENER	S.	
	Hanging Rock, No. 1 Hanging Rock, B 1 Hanging Rock, No. 2 Hanging Rock, No. 3 Hanging Rock, No. 3 Others, Nos. 1 and 2	18.50 @. 18.00 @. 17.00 @. 16.00 @. 15.50 @. 14.00 @.	16.00
1	FORGE.		
	Stonecoal, Coke and Charcoal	14.00 @	20,00
١	CAR-WHEEL.		
	Hanging Rock Cold-blast Charcoal. Hanging-Rock Warm-blast Char-	25,50 @	27.00
ı	coalAlabama Warm-blast	20.00 @. 21.50 @.	21.00 $26.00$
1	No sales Scrap reported.		
I	-		
1			

### St. Louis.

HOFFER & Co., of St. Louis, report to us as follows, under date of January 19, 1885:
We have no change to note, and rejectors.
We have no change to note, and rejectors.

main as we last reported:	
HOT BLAST CHARCOAL IRONS.	1
Missouri \$15.00 @ 17.00	I
Southern	1
COAL AND COKE IRONS.	
Missouri	E
Ohio	(
MILL IRONS.	0
Red-short       15.50 @ 16.00         Neutral       14.00 @ 16.00	F
CAR WHEEL AND MALLEABLE IRONS.	
Missouri	G
Southern 23,00 @ 27,00 Ohio 25 00 @ 30,00	G
SCRAP.	E
Rails 18.00 @ Wheels 16.00 @	J
Wrought50 @ .80 Cast25 @ .60	K
	M
Baltimore.	M
D C VI	P

from Eastern Tennessee and Northern Alabama are finding their way through the city to points further South.

Pig Iron—Has continued active, and sales to Southern foundries have kept up remarkably well; prices have undergone no continued active. The Iron market remains dull and quiet. Sales light and for immediate use only. We quote:

Balti	more	Charcoa	1 Whe	el Ir	on (all		
Bal	itimor	re Ore)					29.00
Virgi	nia C	old-Blast	Whee	l Iron		28.00 @	29,00
		, No. 1			*****	19,00 @	20,00
	14	No. 2				17.00 @	4 18.00
	1.6	No. 3				15.00 @	16.00
	6.6	Mottled	and V	Vhite.		13,00 @	14.00
Char	coal (	. B. Bloo	ms		*** **	45.00 @	50.00
Refin	ed do					87.00 @	40.00
						-	

us per to tons resent the etter A prk, has to of Merchants, Nos. 115 to 121 West Main street. Louisville, under date of January 19, 1885, report as follows: At last we are able to report an improved tone to the market. Inquiries are frequent and for large amounts, while orders, too, are much more generous in their proportions and for well-assorted lots. The upward movement started in once with the conviction is stock to have a support of the start of the s some sales have been made at \$15.50, delivered, for Gray Forge. A rather noticeable feature of the trade at present is a disposition on the part of some buyers who are not consumers to make contracts for future delivery of round lots of 5000 to 10,000 tons. Prices certainly cannot go down, and nothing can be safer for parties who have a surplus of money than to put it in Pig Iron, and consumers who are confident is retarded by the numerous and heavy failures—445 is the record for last week, in connection with 448 the week previous, making a serious aggregate that may well give us pause. The method often pursued of assignment to parties directly or indirectly interested, with frequently large preferences, is too common for the comfort and myoved tone to the market. In export the large amounts, while orders, too, are much more generous in their proportions and for well-assorted lots. The upward movement started in Nails; all classes of buyers seemed struck at once with the conviction that they were good stock to have and to hold. The re-establishment of confidence is retarded by the numerous and heavy failures—445 is the record for last week, in connection with 448 the way well give us pause. The method often pursued of assignment to parties directly or indirectly interested, with frequently large preferences, is too common for the comfort and welfare of confidence is retarded by the numerous and heavy failures—445 is the record for last week, in connection with 448 the way well give us pause. The method often pursued of assignment to parties directly or indirectly interested, with frequently large preferences, is too common for the comfort and welfare of creditors.

farmers purchasing tracts of land in this vicinity, with a view of going into the farming business.

Bar Iron.—The demand for Bar has increased considerably, and the mills at Knoxville and Birmingham are running full. They have had no trouble with their workmen, who have appreciated the situation and readily consented to such reductions as have enabled the owners to offer to the trade a continued supply of assorted sizes at \$1.70 rate.

Old Rails.—Sales continue at about \$16, and there is an increased inquiry. Scrap of all kinds is, however, neglected, with the some sales have been made at \$12.50 @ \$13.

Railroad Fastenings—Continue to rule at past prices, with increased inquiries, some of which are from the far West.

Coal and Coke.—There is nothing new to report in this department; all of the mines are running full, and some are constructing more ovens for an increased output of coke; more evens for an increased output of coke; some of our furnaces are turning on to Coke in place of Charcoal.

Ores.—We have nothing new to report, as furnaces are well supplied for the future.

In at such a rate and for such volume that an advance of 10¢ has been established, and, owing to the stiffness of the mills, it promises to be readily maintained. Both Riverside and Bellaire Mills, who chiefly supplied Steel Nails to this market, are closed down by strike and are taking no from the Port of ? closed down by strike and are taking norders for future delivery. General Hardware.—It is an uneventful week now tha does not give us a new Screw list. The Dayton Screw Company strikes out on ar independent sheet, and issues one at low figures and a light discount. The bewildered recipient of these various and varied favor may well exclaim, "A plague on both you houses!" It is certainly due the trade tha

50	outlook is favorable, and we		
00	trade soon :		
00	PIG IRON.		
UU	Southern Coke, No. 1 Foundry	\$17.00 @	17.50
00	No. 2 "	16,00 @.	16.50
N	Hanging Rock Coke, No. 1 Foun-	20100 60	
	dry	17.00 @	18.00
	Hanging Rock Charcoal, No. 1	11100 09	4
	Foundry	21.50 @	22.50
	Southern Charcoal, No. 1 Foundry	18.00 @	19.00
	Silver Gray, different grades	14 50 @	16.00
	Southern Coke, No. 1 Mill, Neutral.	18,50 @	14.00
	" No. 2 " "	13.00 @	18.50
O	No. 1 " Cold-sh't.	13.00 @	14.00
	Southern Charcoal, No. 1 Mill	16,00 @	17.00
	White and Mottled, different grades	12.00 @	13.00
0	Southern Car Wheel, standard	10.00	10100
	brands	25.00 @	26,00
_	Southern Car-Wheel, other brands.	21.00 @	28 00
0	Hanging Rock, Cold-blast	25.00 @	26 00
~	Warm-blast	20.50	22.00

### Imports and Exports. IMPORTS.

The following were the Imports of Hard-

	Man TOLK for the Mee	k ending Jan. 21, 1885 :
-	Hardware.	Order,
	Appleton Arthur,	Billets, 8414
	Machinery, case, 1	Forgings, 2
		Bars, 14
()	Bergenstein C.	Case, 1
0	Machinery, case, 1	Pieces, 2
0	Boker Hermann & Co.	Tubes, cs., 3
	Hardware, cutlery,	
	and guns, pkgs., 29	Iron.
0	Boker Carl F.	Baltzer & Lichtenstein,
0	Mdse., cs., 5	Wire rods, bdls., 78
0	Clark G. A. & Bro.	Baring Bros. & Co.
	Machinery, case, 1	Rods, coils, 13,081
	Curley J. & Bro.	Iron blooms, 1072
0	Case, 1	Bars, 3169
D	Field Alfred & Co.	Brown Bros. & Co.
	Casks, 7	Wire rods, coils, 768
	Mdse., cs., 9	Coddington T. B. & Co.
)	Graef Cutlery Co.	Sheets, bdls., 377
)	Cases, 4	Morton, Bliss & Co.
)	Gurney Fred. B.	Sheets, cs., 4
	Cases, 2	Galv. sheets, cs., 17
	Hoe R. & Co.	Naylor & Co.
	Mdse., case, 1	Bars, 2557
	Johnson John & Co.	Flat ends, bdls., 4784
1	Mach'y, pkgs., 25	Stetson Geo. W. & Co.
	Kursheedt Mfg. Co.	Pig, tons, 50
	Machinery, pkg., 1	Tillotson L. G. & Co.
1	McCoy & Saunders,	Tel. wire, cs., 10
- 1	Packages, 2	Winter & Smillie,
- 1	Moore's Sons J. P.	Cotton ties, bdls.,
- 1	Mdse., cs., 4	24,515
1	Pengot,	Order,
ч	Cases, 8	Bundles, 504
1	Russell Thos. & Co.	Wrought pipes, 30
1	Mach'y, cs., 2	Wire rods, bdls., 3141
1	Schoverling Daly &	Wire rods, coils, 4126
1	Gales,	Pleces, 1250
1	Case, 1	Fence wire, pkgs.,
1	Arms, cs., 24	400
-1	Sellers, W. B.	The description of the

Draw monda	31	0 450
Brass goods		3,459
Bronzes	11	518
Chains and anchors		1,839
Clocks	17	1,116
Copper		190
Cutlery	97	\$4,535
Guns	46	11,504
Hardware	11	624
Iron, pig, tons	489	12,021
Iron sheet, tons	18	1,528
Iron, ore, tons	887	1,862
Iron, cotton ties	22,176	12,021
Iron, other, tons	1,516	55,874
Machinery	90	7,993
Metal goods	293	29,212
Nails	1	25
Needles	15	6,723
Nickel	- 2	225
Old metal		361
Platedware	11	941
Plumbago	150	1,439
Pins,	202	3,783
Saddlery	4	199
Steel	117,267	127,944
Tin, boxes		148,339
Tin, 3,057 slabs	35,118	59,114
Wire	613	2,160
Zinc, lbs		60
Zinc oxide	50	465
The comparison with prev		
follows:		
For the	3 weeks	Same

follows:			
	For the week.	3 weeks of 1885.	Same time 1884.
Cutlery, pkgs	97	2255	8:21
Hardware, pkgs	11	46	3/3
Iron, R. R., bars			6,766
Lead, pigs		2,958	
Steel, pkgs		154,068	89,260
Tin, bxs		128,788	37,868
Tin slabs, lbs		897,698	189,917

### EXPORTS.

27	The following list en	nbraces the Exports of
y	Hardware, Machinery	, Iron, Metals, &c.,
0	from the Port of Ne	w York, for the week
1-	ending January 20, 18	885:
t	Danish West Indies.	Quan. Val
е	Quan. Val.	Mach'y, pkgs. 14 1,26
n	Hdw., pkgs 2 \$18	Sew. ma., cs. 682 13,898
W	Ptlm., gals3597 395	Wringers, cs. 6 10 Mf. iron, pkgs 3 5
d	Mf. iron, pkgs 37 244	Hdw., pkgs 88 1,69
8	Nails, kegs 10 26	S. rollers, cs 41 53
F	Amsterdam.	Antwerp.
	Clocks, cs 2 94	Mf. iron, plega 50 200
ti	Hdw., cs 12 242	Ptlm., gals.627,200 48,986
of	Dutch West Indies.	Copper, cks 86 13,92
8	Clocks, pkgs 9 18	Revolvers, cae 1 1
	Nails, kegs 4 14	Clocks, cs 4 11: Copper, bars . 169 2,700
86	Ptlm., gals 748 78 Hdw., cs 6 25	Guns, case 1 18
0	Dutch East Indies.	Bew. ma., cse 1 48
6.	Ptlm., gais. 826,000 32,000	Rotterdam.
0	Bremen.	Ag. imp.,pkgs 25 1,89
n		Copper, cks 321 60,18
	Mf. iron, pkgs 6 225	Mf. iron, pkgs 84 40
	Door springs,	Hdw., es 88 49 Lend. lbs 17.898 1.88

Quan. Val. | Santo Domingo. 

### Foreign Markets.

FRANCE.

Antwerp.

Antwer

partments dependent on the Parisian demand. The many works that are planned here and those in connection with Paris will now soon be taken in hand, so that it may be predicted without fail that the spring opening is going to be fair in point of activity. Coal might be livelier; the winters of ar proves a disappointment in this part of Europe.—Moniteur des Intérêts Matériels.

| Mach'y, pkgs. 89 | 10,405 | Mark, pkgs. 79 | 178 | Mark, pkgs. 80 | 178 | Mark, pkgs. 80

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1882,   Tons.   28,695   Pyrites.   482,312   ron Oro.   3,889,109   ngot Copper   17,996   Quicksilver   1,034   Argentiferous Lead   36,697   Common Lead   60,634	1883. Tons. 27,664 481,597 3,558,282 19,446 495 39,031 63,904	1884. Tons. 24,735 504,967 8,363,108 15,026 1,179 42,390 55,549
Total 4.121.277	4,190,419	4.010.954

The Fontaine Locomotive a Failure.—On the roth inst., at Detroit, Mich., occurred the last act in the Fontaine locomotive episode. This locomotive was the invention of Eugene Fontaine, of Detroit, and wonderful results were promised for it. The central idea was the introduction of two friction-wheels above the driving-wheels. By the contact of the upper wheel with the lower wheel a greater number of revolutions per minute could be obtained, and hence a greater speed would result. A company was formed with \$1,000,000 nominal capital. Two engines were built at an expense of \$25,-

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# Trade Report.

### General Hardware.

The general condition has not materially altered since our last report. Many travelers are already on the road, but are not as yet sending in many orders. The changes in quotations are not important, but prices, as a whole, are not strong. There are some favorable indications for trade and a somewhat better tone, but the demand for goods

The demand continues to be of limited ket has been considerably curtailed of late, little business now in course of transaction. The condition of the market is such, in view Wire suits are on trial at Leavenworth, Kan., and if the Washburn & Moen Mfg. gardless of the extras allowed. Co. are successful in this contest they will recover a great deal of lost ground, which Western prices on a more satisfactory basis for Eastern competitors. Quotations continue on the basis of 5 cents to 51/4 cents for small lots of Galvanized Four-point. For carload lots these rates are shaded. NAILS.

The local agents of Eastern factories unite January. Sales have been up to this time fully 50 per cent. greater than those made of lists: in December. It is, of course, understood that trade is now more concentrated than ever, owing to the withdrawal from the market of several factories, either by stoppare of operations or a refusal to meet current prices. Some factories have succeeded in securing orders for their entire output for the next four weeks, which also results in diriging into closer quarters buyers who de. the next four weeks, which also results in driving into closer quarters buyers who desire Nails for immediate delivery. While prices are held somewhat firmly, it is not believed that an advance will be established, but the prospects are decidedly in favor of the maintenance of present rates. Perhaps the maintenance of present rates. Perhaps the maintenance of present rates. Perhaps the decided for the sore will be a stablished to the maintenance of present rates. Perhaps the maintenance but the prospects are decidedly in favor of they give us a list that is net, or nearly the maintenance of present rates. Perhaps so ?" As the cowboys would say, he must the spring demand may force prices up a be a "tenderfoot," Among all expert the spring demand may force prices up a be a "tenderfoot." Among all expert little when it sets in, but in the meantime Hardware men it has long been a settled contingencies may arise which will prevent fact that it was desirable to have lists contingencies may arise which will prevent such a movement. Sellers of Steel Nails report a continued fair demand for them, but they are not yet displacing Iron Nails in this section to an appreciable extent. Quotations for Iron Nails continue on the basis of \$2.05 @ \$2.10 for small lots from New York store, with \$2 said to be the rate for large lots. Steel nails command to cents to report a continued fair demand for them, large lots. Steel nails command to cents to 15 cents more than Iron Nails.

The trade will learn with regret of the death, to-day, after a lingering illness, of ALBERT L. WOODRUFF,

who for more than 13 years has been connected with the Russell & Erwin Mfg. Co. as traveling salesman, and as such had an extensive acquaintance, especially in the

THE WINCHESTER REPEATING ARMS COMPANY, New Haven, Conn.; 312 Broadway, New York, and 418 and 420 Market street, San Francisco, issue, under date January to, the following reduced price list of the Winchester Repeating Rifles, the list being subject to discount of 25 per cent., as announced in our last is-ue :

		1		obor c	2011100
W	inchester Rifles.	Carbins.	Musket,	Octacon or half octa- gon.	Round.
Model	1868, Rim Fire 1878, 22 Cal. R. F 32 " C. F			19.50	\$16,00 18,00 18,00
	85 10 11	17.50 17.50	19.00 19.00	19.50 19.50	18.00 18.00
6.6	1976, 40-60 C. F 45-60	19,00 19,00 19,00		21.00 21.00 21.00	19.50 19.50 19.50
Expre Hotch		19.00	20,00	27.00 28.00	\$5.00 \$1.00

The circular announcing this change gives also reduced prices for "Extras" and "Sights," and gives prices also of Cart. ridges adapted to these R fles, and the following reduced price list on the Tools for reloading Central-fire Cartridges :

\$2.00 \$1.20 \$0.10 \$8.00 2.50 1.20 0.10 8.50 2.50 1.70 0.10 4.00

The price list of their White Felt Gun Wads, 3% inch thick, which they refer to as equal to the best imported Bag Wads, is also given. In connection with this we may mention that they send out an effective calendar, on the various menthly sheets of which their goods are displayed.

SCREWS. As we announced in our last issue, the

Dayton Screw Company, Dayton, Ohio, for T whom J. H. Graham & Co., are agents, 113 Chambers street, have adopted a new list which differs materially from both of those which are before the trade. This list we lay before our readers in another column. Their discounts on Wood Screws will be as

E CANADA SE S														
Flat-Head Iron										 	0			331/8
Round-Head Ire														
Flat-Head Bras														
Round-Head Br	88.6													3316

In their circular announcing this change of they have reduced their prices on the whether, as the result of this consolidation of medium and larger sizes, they will not use any German or cheap Wire of any brand, but will continue to use the best grade of American Charcoal Iron Wire, and guarantee their goods, as heretofore. They also generally taken by the trade and by the say that they have not put on their list such sizes as are not kept in stock and are seldom called for, but that they have facilities for making all sizes made by any other manufacturer.

A careful comparison of the list with those of the Russell & Erwin Manufacturing Company and the American Screw Company shows that there is no very essential variaproportions, though inquiries show that an tion in the net prices of Screws at the differexpansion of business is among the possi- ent regular discounts, but that there are bilities of the near future. The number of many minor differences, some Screws being companies competing for trade in this mar- cheaper and others somewhat dearer. The trade will very carefully scrutinize the difand prices are being held very well for the ferent lists, that they may know whether any advantage is to accrue from the purchase of one or the other line of Screws. of the limited supply, that a very slight The Dayton Screw Company announce that increase in the demand would stiffen prices their special discounts will be the same as considerably. The Iowa and Missouri Barb- those of other companies, so that the same percentage of variation will be preserved, re-

The letter from "Hardware," which appeared in our issue of two weeks ago, still may probably have the effect of putting continues to attract attention from the trade, some of our correspondents strongly seconding his suggestion that a Screw list which would fairly represent the price at which Screws could be sold would best serve the convenience of Hardware men, and others and experienced observer: taking the opposite view. Among these the following from an Eastern Hardware merin reporting an unusually fair demand for chant will repay perusal, touching as it does on the general question of the range

large enough so the discounts should exceed 50 or 60, and then, so far as possible, in view exist rather by chance than because they are liked or wanted by any one. The Car-riage Bolt list was only reduced when the current price became so low that the added discounts made more than 100. I suppose some one will ask, How about the Tack list † Easily answered. The Central Manufacturille Easily answered. The Central Manufacturing Company, plainly seeing that lower net prices would some day be necessary, wisely made a list large enough to do away with the necessity of issuing a new list when that time arrived. As to the merits or demerits of any of the Screw lists, the one just dis-carded, the new American or the Russell & Erwin Mfg. Co 's, as they are all large, any one of them is good enough. But, emphat-ically, I say, let the companies agree and all use one and the same list GREEN MOUNTAIN BOY.

Another Hardware man, in referring to

the lists of the American Screw Company and the Russell & Erwin Mfg. Co., says :

How much necessity there may have been for changing the relative proportions of the old list, we cannot say, but we do know that changing lists on staple goods is a great in-convenience to the retail trade, and when ary change is made it should be to something like the highest retail price, or to a list that brings the discount at from 33½ to 50 per cent. The manufacturers may have a me object in making such very high lists and discounts, but from our standpoint it ooks like no venience the old list should be divided in the weinence the course were cor-middle, and if the inequalities were cor-rected up it would suit us better; but a poor list let alone is better than frequent changes. Screws will be cheaper for us at present than before, as we use compara-tively few of the small sizes which are materially advanced.

CORDAGE.

The following revised list of Cordage has been issued under date of January 19, which is subject to the usual discount to the trade of I cent per pound:

Manila.

Cts. p	er fb.
1¼ inch eir. and upward, and Hay Rope 12 thread, or ¾ inch diameter and 9 thread, or ¼ and 5-16 inch diameter Bolt Rope Yarns Whale Line Farred	1416 15 1516 16 1616 14
Sisal Rope.	
1¼ inch cir. and upward, and Hay Rope. 12 thread, or ¾ inch diameter 5 and 9 thread, or ¼ and 5-16 inch diameter. Farred.	9 936 10 814
Russia Hemp.	
Tarred Cordage, Ratline, Selzing and Worming	12
Farred Cordage, Ratline, Seizing and Worming	12
Jute.	
Rope, 14-inch diameter and upward	8 8 8

TINWARE

methods of the Central Stamping Company, list and discounts, they mention that, while purchasers being solicitous of knowing interests, they will be called upon to pay materially higher prices for Tinware, and manufacturers considering the question as to how it will affect their interests. The view manufacturers is that somewhat higher prices will be established, a conclusion that both reach without reluctance, the trade recognizing that unduly low prices in any line is not in the long run desirable, and manufacturers, of course, regarding with satisfaction anything that promises to give them better margins on goods that have been exceptionally close. It will be a matter of congratulation for all concerned if there should a sufficient strengthening in prices to justify the furnishing of good, honest goods at a reasonable profit, and we hope that the trade will show their common sense in purchasing such Tinware, even though it be necessary to pay a considerably higher price for it than for the cheap and worthless stuff which has been so extensively sold. We are pleased to hear the view expressed by some whose opportunities for observation are extensive that a reaction against the use of this cheap ware is apparent, but there can be no question that a great deal more of it is made and sold than ought to be.

Since our last issue we have received the following communication from a stamping house, which will be read with interest, referring as it does to the situation and outook, and giving the views of an intelligent

I recognize in the names of the directors of the new company several gentlemen who are known to be very conservative, and I believe their influence will prevail in the management of the Central Stamping Company. As these houses have propaging supplied considerably more than half the trade of the country, I am convinced that the effect of this consolidation will be favorable to all business interests of this class. It is well known that many articles in this line have been produced at a loss for some time past, and on all such it is reasonable to expect an advance in price, but I do not look for any radical change in prices as the immediate and Sidney Shepard & Co., not to mention a number of lesser lights, will make an a number of lesser lights, will make an equally good grade of goods, but will see the folly of attempting to gain business by cutting under the prices of the C. S. Co. Some other concerns, which I might enumerate if disposed, will cater to the "cheap" or bazar trade, and, of course, make the class of goods such trade demands. I anticipate that the lines between good and poor goods will be materially emphasized. There can be no doubt of the large demand for bazar goods, and a visit to such an establishment. goods, and a visit to such an establishment reveals the class of people who buy cheap goods—the very class who can least afford to throw away their money on such worthle-s trash as such stocks usually consist of. bave never catered to this trade and do not know much about it. Our aim has been to make the best that could be made, and we nave a fair demand for our product. To show that we have the "coursge of our convictions," we have determined to manufacture hereafter from IX and IXX plates of Calland grade exclusively. Legitimate dealers are more inclined to let the bazars handle the cheap goods while they stick to such grades as can be considered standard. We grades as can be considered standard. We anticipate an increased demand with the opening of spring trade, and believe there will be a gradual improvement from this time on. This appears to be a pretty general sentiment in this quarter, and if people can get generally into this way of thinking the the thing is accomplished.

The following letter from another house gives, it will be perceived, a succinct statement of the writer's views with reference to the principal questions concerning this line :

The effect of the formation of the Central Stamping Company will, we think, be for the interest of all those out of the combina-tion, as the competition will not be so great. The force of drummers will be reduced; con-sequently prices will be maintained better than formerly. It is not probable that prices will be advanced. The day for cheap goods has gone by, and the trade generally want a The day for cheap goods better grade. Trade is better with us at present than it has been for several years past at this season of the year, and the general outlook is encouraging.

ITEMS.

The following is the new list of Le Page's Carriage Glues, Mucilage, &c., made by the Russia Cement Company, Gloucester, Mass., for whom Tower & Lyon are agents, 96 Chambers street, New York, the list being subject to discount to the trade of 20 per cent .:

Half-pints		An
Half-pints		40.00
		4.78
Quarts		7.50
Half-gallons		12.00
Gallons Kegs, 5 or 10 gallons, per gallon		1.68
Bottles.		
Small Family, 100 in case, per case		
Large " 1 gross in case, per gr	068	18.00
Bell Mucilage, 1 " " Barrels, 40 to 50 gallons, per gallon	16	12.00

quested to the advertisement in Special tion. They also call attention to their line Notices of Lock Patterns for sale. The of Forged Single and Double Hand Wrenches Trimmers, Grape and Flour Gatherers, Little advertisers have relinquished that branch as constantly increasing in size and variety, of business, and it is intimated that they and to their assortment of Lathe Dogs, would make very satisfactory terms to the Shafting, Collar Forgings, &c., which will right parties.

### DAYTON SCREW COMPANY'S

	IROS	N E	SCR	ew	8.	BRASS SCREWS.				
1/4 inch.	% ine	ch.	134 No.	inch.	No.	% in	ch.	% inch.	134 inch	
0\$0.11		0.13		\$0.21			\$0.10		No. 9 \$0.	
I II		.13								
2II		.14				2	.21	743		
	8	. 14		. 26				850	12 1.	
	9	.15						9 57		
	10	. 16		-				1065		
3% inch.	12	.17					ah	1173		
No.	13	. 19				22	cn.	1391		
\$0.11		.21	18	.43	, ,	I	\$2.20		18 2.	
II		.23	20	.49		2	.21	15 1.12		
II	16	.25	22	.56		3	.22	16 1.23	22 3.	
12			24	.64		4	.23	1	24 4.0	
12					No.	5	.25			
12	I inc	la.			14\$0.48		.27	a Imah	2 inch.	
13		и.			1552	8	.29	No.	No.	
13	580	) T4			1762	0	.31	5\$0.40	10\$1.2	
	6	.14			1868			6 41	I Aktore Aug	
	7	.15	2 in	ch.	2078			747	12 1.5	
	8	. 15	No.		2290			855	13 1.7	
1/2 inch.	9	.16	10		24 1.02	1/2 in	ch.	963	14 1.9	
lo.	10	.17	11	. 26	26 1.17	No.		1071	16 2.3	
2\$0.11	11	.18	12	. 29		2\$		1180	17 2.6	
311	12	. 20	13	.32	at/ inch	3	.23	1290	18 2.8	
412		.21	14	-35	No.	4	.25	13 1.00	20 3.4	
512		.22	15	.38	16\$0.65	6	.27	14 1.11	22 4.0	
713		. 26	17	-44	1771	7	.32	15 1.23	24 4.6	
813		.28	18	.48	1877	8	.37	17 1.49		
913		.30	20	55	2090	9		18 1.63	21/4 inch.	
014	1	.33	22	.63	22 1.03	10	.46	20 1.92	No.	
			24	.71	24 1.18				11\$1.7	
					26 1.34				12 1.7	
	= 1/ im =	.1.						/	13 1.9	
% inch.	No.	n.			4 inch.	Wine	de la	1 % inch.	15 2.4	
0.	6\$0	. 15			No.	No.	ш.	No. 6\$0.54	16 2.6	
280.11		.16	2 1/4 in	ach.	18\$0.87	2\$	0.22	755	17 2.9	
II		.17	No.		20 1.01	3	.24	865	18 3.20	
12		.18	11\$	0.30	22 1.16	4	.26	9 74	20 3 7	
12		.19	12	.32	24 I.33	5	.29	1082	22 4.4	
13		. 20	13	.35	26 1.50	6	.32	1194	24 5.1	
13		.21	14	.38		7	.36	12 1.06	/:	
14		.23	16	-41	41/ inch	8	.41	13 1.18	2½ inch.	
14		27	17	.49	4½ inch. No.	9	. 46	14 1.32	No. 12\$2.30	
15		20	18	.53	18\$0.96	II	.58	16 1.44	13 2.3	
16		31	20	.60	20 1.12	12	.65	17 1.76	14 2.38	
		33	22	.70	22 1.30			18 1.93	15 2.64	
	20	38	24	.80	24 1.48			20 2.29	16 2.92	
					26 1.68				17 3.21	
				- 1			.		18 3.52	
inch.						¾ inc	h.		20 4 . 17	
). An re	1 1/2 inc	n.		- 1	5 inch. No.	No.		1 1/2 iuch.	22 4.80	
	No.		2 1/2 in	ch		4 \$0		No.	24 5.07	
13	8 <b>\$</b> 0.		No.	OLL.	20\$1.30	5	.31	8\$0.74		
14			12\$0	0.35	24 I.70	7	35	9	3 inch.	
14			13	.38	26 1.90	8		10 97	No.	
15			14	.41		9		12 1.23	14\$3.42	
15			15	.45		10		13 1.38	15 3.43	
16		28	16	.49	6 inch.	II		14 1.53	17 4.15	
17			17	.53	No.	12		15 1.69	18 4.92	
18		10.00	18	-57	24 \$2.10	13	.82	16 1.87	20 5.76	
20			20		26 2 . 30			17 2.06	22 6.68	
22	18		24		28 2.50				24 7.62	
	20			.87	30 2.70	10 1	7 7	70 0 69	26 8.60	

was taken advancing the price to the retail, ing been destroyed by fire on the 14th inst., W. B. Belknap & Co., Louisville, Conn.,

ssue a Nail card for the new year, in which time forward. they refer to the striking example of Nails, which they now speak of as an essen-Bellaire brand, of which they carry a complete assortment in stock. The same house issue a circular informing the trade prices on Plow Slabs and Shapes, Plow Beams and Handles, Heel Bolts and Grass Rods, Single and Double Trees, Clevices and Lap Rings, Hames and Trace Chains, for which, as well as for their general line of Hardware, they will be pleased to furnish quotations

The catalogue of Andrew B. Hendryx & Co., New Haven, Conn., for 1885 has been issued, and gives a very complete exhibit of Bird Cages, to the di play of which nearly 100 pages are devoted. It also shows the line of Brass and German Silver Sheet Metal and Wire which they offer, and their Brass, Bronze, Iron and Silver Chain, of which full illns

the firm of Joseph Woodwell & Co., Pittsburgh, the senior partner retiring and William K. and Joseph R. Woodwell, his sons, continuing the business. Joseph Woodwell, prosperous and honorable career, is highly spoken of, and the press of his city pays an appreciative tribute to his character and and Irons, Washers, Small Forgings, &c. A worth. During his business career of half a few of these goods are not carried in stock century it is said that he has never had a or listed in his catalogue, but can be furcheck protested, a note dishonored nor a nished promptly to order.

Bowne streets, Brooklyn, N. Y., announce, under date January I, that W. H. Brock, of Corona, L. I., has consolidated his business interests with theirs. They mention that by this means they acquire additional facilities with the increase of machinery, valuable patents and Mr. Brock's personal services and supervision. They refer also to the Brock Patent Chain Pipe Wrench, which is already known in the market, and of which all times a full stock and assortment, so that they carry a stock of Nos. 1 to 5, and have The attention of manufacturers is re- a smaller size, No. o, in course of construcbe kept on hand.

trade to discount 70 and 10 and 10 per cent. he will be able to resume the filling of orders within 30 days, and without delay from that

In order to meet the demand for Rowlett's progress that is presented in the suddenly Star Roller Skate, the Champion Roller acquired and deserved popularity of Steel Skate and Wagon Company, Richmond, Ind., are erecting a new building, which is detial part of every Hardware merchant's scribed as double the size of the one they stock. They then allude especially to the have now in use. The Northwestern Hardware Company are pushing these goods with characteristic energy.

The American Wire Company, Cleveland, that they are prepared to make special Ohio, issue neat and convenient calendars for the present year, one of which, in con nection with the monthly sheets, has an adjustable arrangement by which the day of the week and of the month are indicated.

By their advertisement on page 10 it will be seen that Dame, Stoddard & Kendall, Boston, Mass., call attention prominently to their liue of Fishing Tackle, &c.

W. F. Thornton, Cleveland, Ohio, anounces that he has opened an office at 122 Water street, Room No. 11, for the sale on commission of Spikes and all other Railroad Supplies, Car Builders' Material, Heavy Hardware, Metals, &c.

Chas. B. Head, Allegheny, Pa., successor to The announcement is made of a change in facture the line of goods made by his prede cessors, such as Carriage, Machine. Plow. Skein, Tire, Elevator, Pit Car, Heel, Stove, Sleigh Shoe and Foundation Bolts, Coach and Lag Screws, Bolt Ends, Blank and who thus retires from active duties after a Tapped Nuts of all sizes, Lock and Tail Nuts, Stove, Furnace and Grass Rods, Square Spikes, Bridge and Barge Bolts, Nuts, Spikes

The Acme Shear Company, Bridgeport, J. H. Williams & Co, corner Richards and Conn., have just issued a catalogue and price list of the Shears and Hardware Spe cialties of which they are the manufacturers. the descriptions, prices, &c., being given both in English and Spanish. In their in troductory remarks they refer to being the largest manufacturers of Cast Shears in the world, and mention that they are constantly improving the quality and finish of their goods. They endeavor to have on hand at they may fill orders promptly. In addition to the Acme, Diamond and Victor Shears, this catalogue exhibts Pruning Shears, Lamp Giant Nut Crackers and Nut Picks, and the Ice Tool and Lemon Squeezer to which we have recently referred, and the Duplex Fruit Can Tool.

The trade are still awaiting with interest A meeting of the manufacturers of Bright O. B. Wilson, Collinsville, Ill., announces V. G. Hundley, 122 Chambers street, New announcements regarding the prices and Wire Goods has been held, at which action to the trade that, his Stock Bell factory hav-

Jac Jac Jac Car Mill Tim Pian Doo Rac Car Well Whe Rigg

Wales

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I

Sock

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Boat

Thole

Boat

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Tho

Handle Company, whose factory is located at Greensboro', N. C., has issued, under date Lignumvitæ She January 1, a convenient and comprehensive price list of the Handles and Spokes of which he is the manufacturer. In his preface he mentions that, his facilities for manufacturing these goods having been largely increased by means of added machinery and access to new fields of timber, he is enabled to offer to the trade, as shown in this list, many new patterns suited to domestic and foreign markets. The goods made by him have "North Carolina Handle Company" stamped on each case. He is also prepared to furnish Hickory, Oak and Ash Plank in carload lots. The catalogue exhibits comwith illustrations of the different styles. The table of Shipping Weights, and of Measurements and Weights of Handles in Cases will be of use to the trade. The catalogue includes also list prices of the Washoe Solid Punched Adz Eye Tools, which are illustrated in it.

THE WILSON MFG. CO.,

1885.

nch

\$0.95

1.23

1.94 2.13

3.05 3.57 4.00

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New London, Conn., are about to issue the following discount sheet, which applies to their catalogue of 1881 and 1883:

\$8.50 9.00 8.50 6.50 5.00 8.50  Side Mills. No. 0	Side Mills. No. 0		\$5,50
Nos. 25	Nos. 25   30   3     Nos. 25   30   3     \$11.00   9.50   8.   Vise Boxes and Screws—change list   Nos. 10   15   16     \$1.94   1   194   1     \$3.00   6.00   6.   Pall Bench Vises, No. 00, \$2.50—ch   Parallel Bench Vise Nuts.		
Nos. 25 30 35 40 50 50 50 50 50 50 50 50 50 50 50 50 50	Nos. 25 80 8 \$11.00 9.50 8.0 Vise Boxes and Screw—change list Nos. 10 15 14 \$3.00 6.00 \$2.50—ch. Paul Bench Vises, No. 00, \$2.50—ch.		
Vise Boxes and Screws—change list	\$11.00 9.50 8.0  Vise Boxes and Screws—change list  Nos. 10 15 10  \$1 19,6 17  \$3.00 6.00 6.  Pall Bench Vises, No. 00., \$2.50—ch.  Parallel Bench Vise Nuts.	1.	
Nos. 10 15 16 17 1 194 134 2 inch 183.00 6.00 6.50 8.00 Pall Bench Vises. No. 00. \$2.50—change list	Nos. 10 15 16 1 196 12 \$3.00 6.0 Pall Bench Vises, No. 00., \$2.50—ch.		- Britis
1 154 134 2 inch \$3.00 6.00 6.50 8.00 Pall Bench Vises. No. 00, \$2.50—change list	1 156 12 \$3.00 6.00 6. Pall Bench Vises, No. 00., \$2.50—ch. Parallel Bench Vise Nuts.		9
Parallel Bench Vise Nuts	Parallel Bench Vise Nuts	lá .	2 inch
	Coachmakers' Vises		5

Geared Braces.... Orill Stocks and Bows. Lathes.
Lathe Wheels.
Lathe Pulleys, Hangers and Shaft.
Hot-House Pulleys.
Sliding Door Sheaves.
Sliding Door Rail
Shutter Sheaves. Casters.
Sash Rollers
Side Pulleys
Upright Pulleys
Frame Pulleys
Axle Pulleys.
Bit Holders.

Bit Holders... Coopers' Crox Tools... Shutter Screws. Stubs and Plates. Shutter Lifts. Box Chisels—change list. Inches... 10 12 Japanned...\$5,75 6.75 Polished....\$7.90 8.00 Jack Screws (Bell Bottom).
Jack Screws (Wrought-Iron Barrel).
Jack Screws (Straight Barrel).
Jack Screws, Locomotive
Car Box Jack Screws.

Inches..... Each Mill Screws
Timber Screws
Piano Stool Screws (Wrought Iron)
Piano Stool Screws (Cast Iron)
Piano Stool Screws (Cast Iron)
Per dog net
Door Claups
Rachets and Pawls
Carnet Stretchers Carpet Stretchers
Well Wheels (Anti-Friction)
Well Wheels (Plain) Extra Heavy
Wheels (Anti-Friction).
Riggers' Screws—change list

Gin Wheels

Thimbles. Gaff-Topsail Hooks. Connecting Shackles (Thompson's Patent). Burrs or Washers. Burra or Washers.
Rings
Mast Hoops
Sister Hooks
Sister Hooks
Sister Hooks
Match Hooks and Thimbles
Hooks and Thimbles
Grappling Irons
Ring Bolts
Screw Ring Bolts
Screw Ring Bolts
Anchor Shackles
Chain Shackles
Boat Cleats
Boat or Awning Cleats
Chocks

Can Hooks...
Flour Barrel Hooks...
Hogshead Hooks...
Hawser Pipes.
Galvanized Hasps...
Galvanized Hinges...
Brass Hinges...
Proc. Patter. Brass Hinges
Door Bolts.
Rudder Yokes
Rudder Yokes
Calking Irons (Steel Points).
Calking Irons (Cast Steel).
Steering Straps
Mast Hinges
Rollers for Chocks
Press Screws for whalemen
Whale and Seine Boat Row Locks
Bus nings, Flange.
Ankie and Wrist Shackles.
Cold Chisels—change list.
Inch. ½ ½ 56 34

Metal Sheaves Lignumvitæ Sheaves Blockmaker's Rivets Block Pins Mast Hoop Forelocks Pump Chambers Mask Hoop Forelocks
Pump Chambers
Clothes Line Pulleys
Clothes Line Pulley, "Chaney's"
Quarter Blocks
Derrick Blocks
Wharf Blocks
Iron Strapped Blocks
Rope Strapped Blocks
Snatch Blocks
Cotton Hooks
Rox Hooples lox Hooks Iay Hooks Surglar and Tramp Stoppers—change list, No. 5 50¢. 50¢ Tuyere Irons Lathe Chucks Mowing Machines and extras

In the same circular they call attention to plete lines of the goods to which it refers, Chaney's Improved Clothes Line Pulley, which is made of galvanized malleable iron. and to whose cheapness, durability, utility, convenience and strength they allude. They state that the peculiar construction of the Pulley enables them to use a larger pin for the sheave to run on than is used in any now on the market, and that the space for the rope is also very wide, allowing a knot in any ordinary clothes line to easily pass through. They make the further points that its use secures a great saving in the wear of lines, and that it will not clog up with ice in winter. It is sold complete at \$2.25 per dozen, or without screw-eyes at \$2 per dozen, subject to the discount above mentioned of 40 per cent. They also issue the following notice to the trade:

New London, Conn., January 15, 1885. To the Hardware Trade: We have this day withdrawn our agency from Messrs. Bates, Wilson & Co., of 294 Broadway, and have appointed Mr. Frank Baldwin, 33 South street, our agent for the sale of ou goods in New York and vicinity. He wil carry a full line of Solid Box Wrought Iron Vises, Bench Vises, Jack Screws, Lathes, Coffee Mills, Well Wheels and all Hardware coffee Mills, Well wheels and all Hardware goods made by us. He will at all times be able to quote factory prices and fill orders promptly.

Yours very respectfully,
THE WILSON MFG. Co.

From an enterprising and well-known Hardware house in Michigan we have re ceived the following communication with Fig. 2.-Sectional View, with Measurements. reference to their method of

HANDLING DRY PAINTS.

In addition to the cuts, Nos. 1 and 2, which are given herewith, they have sent us a sketch showing that the entire length of the construction is 14 feet, and indicating the sizes of the cases in the different rows, as follows: The first or bottom row has five cases 19 inches wide and five cases 131/2 inches wide; the next or middle row has 12 cases 131/2 inches wide, and the top row has eight cases 9 inches wide and 12 cases 61/4 inches wide. From our correspondent's letter it will be seen that these sizes are referred to as desirable for the cut-

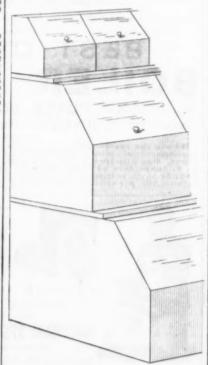


Fig. 1.—Cases for Dry Paint.

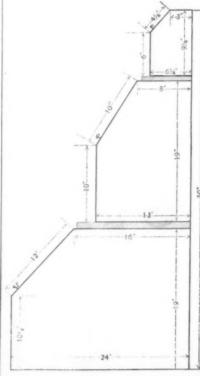
ting of the Tin without waste; but, of who is well known to many of our readers course, they can be readily changed to suit as a prominent business man of Boston, the convenience of any who may be disposed and occupying an important position in to follow the general plan: To the Editor of The Iron Age: I have

seen several communications in your paper asking for suggestions with reference to the arrangement of Hardware stores. We have an arrangement for keeping dry paints, the convenience of which almost surprised us when we had it made. As most Hardware dealers keep paints and oils, we feel certain that a knowledge of how the thing is done will be of interest to them. We made the cases of tin—a cheap grade of IX tin, 20x 28, is good enough—double-seamed together, and having the opening for the hinged cover wired with No. 8 wire. The covers are hinged at top, thus lifting up and dropping back against the tier of cases overhead The cases are made in different sizes, but all so as to cut from above sizes of tin to advantage. On the top of the lower tier of cases an inch board about 14 inches wide is placed, and above this the second tier of cases. Over this again is placed a board about 7 inches wide, and on this a third and upper tier of cases. We placed the lower tier about 8 inches from the floor. With a small table and scales in front of these cases we are able conveniently to handle all dry being so large, is still very great, aggregating as it does \$1,400,000,000 annually, with that these cases are conveniently constructed the balance of trade in our favor. Our acto put goods in and take them out, as those cumulated wealth is prodigious, being \$44,-

label. We like this better than painting the label on the case, as it facilitates making changes if we desire. If there is not room be used but the size of the cases cannot be deviated from much without cutting the tin to bad advantage. Any tinsmith can make these cases and during the cases cannot be the cases and during the tin to bad advantage. Any tinsmith can make these cases and during the cases cannot be cases and during the tin to be advantage. Any tinsmith can make these cases and during the cases cannot be cases and during the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin to be deviated from much without cutting the tin the Withington & Cooley Mfg. Co send out the following open letter:

JACKSON, MICH. U. S., December 30, 1884.

To the Hon. J. Johnson, Commissioner of Customs, Ottawa, Canada—SIB: Your memorandum No. 150, of November 1, 1883, has but just come into our hands. Though now a little stale, it is that the Withington & Cooley Mfg. Co to bad advantage. Any tinsmith can make these cases and during the dull times this winter is the time to do it, that the store may be ready for the spring trade. After they have been used one season ten times the cost would not induce the merchant to



go back to barrels, kegs, cases, sacks, &c. The cost of these cases which we have described was as follows:

34 box roofing tin, at \$12 ... . 25 days' work tinsmith, at \$2. ... 25 feet 1-inch lumber, at \$10 ... . 42 i-inch shutter knobs, at i cent... 42 i-inch shutter knobs, at i cent... \$15.97 Total .....

.80

Very truly yours, THE MILLER LOCK COMPANY,

Philadelphia, in the list which they hav recently issued, incorporate the additions to the line of their manufactures which they have made since their last list was published, viz., the Champion Six-Lever Night Latch. which is very satisfactorily exhibited with a sectional cut showing the parts in place and the manner in which it is attached to the door; also the Cash or Deed Box of which we gave a description some time ago. It also contains a description, with price list, of their Champion Store Door Dead Lock, which they have just put on the market. This is a six-lever upright rim store-door Dead Lock adjustable to right or left hand doors from 13/2 to 3 inches thick, operated by key from outside and by knob from inside the door. The case is japanned iron 21/2 x 4 inches, the bolt bronze, 2 x 3/8 inch. Each Lock is packed in a paper box, with three steel keys, complete fittings and directions for putting on. There are six tumblers in each Lock, thus giving a great number of changes, and no two will pass the same key

We are in receipt of a copy of an address has ever been known to history. made by

JOHN H. PARKS,

for the protection of American manufactures and the extension of our commerce, It is of value for its succinct history of upon which the speaker's argument is based. We take pleasure in laying before our readers the following extracts from the address, the whole of which we are unable to reproduce :

In 1861 we made an increase of tariff to tions, until now the average is from 40 to 41 per cent. In the 24 years since 1860 we have changed the ratio of imported manu-

a month for the rewards they can get for their services in no other country. The great bulk of these immigrants soon become thriving, self-supporting citizens. All help to enhance the value of our rapidly growing home market. The public debt of our civil war is rapidly being redeemed, and, to crown all, the public treasury is filled to overflowing with a surplus which we are embarrassed to expend with wisdom; and, not only this, we are perplexed to select objects to exempt from impost which shall not jects to exempt from impost which shall not result in the injury or destruction of some but partially established home industry. It is true that this country would continue in good credit for some years without a pro-tective tariff because of its accumulated cap-ital, but sooner or later disaster would come to it as surely as to any financial institution whose outgoes should constantly exceed its income. And with a lessened income to our Government must come restriction in its expenditures for internal improvements, rivers, harbors, canals and public institutions. Certainly this is not desirable. How much better is a surplus of revenue than a deficiency, whether to a government, corporation or an individual.

But it will be said if the tariff is so great a blessing, so great an advantage to the American people, why this widespread depression in business? The tariff does not seem to make business always good, trade always active and profits always satisfactory. True; but we are so much better off than other nations in this respect that trade is good with us, in comparison with foreign countries, if all the accounts we read are true. But the fact that a business depression does exist here, and to so wide an extent, seems to me the most conclusive reason why we should not admit new competitors to this field to make matters worse than they are. The depression from which we are suffering does not arise from any lack of abundance in our material stores, but from an overproduction of many articles we raise or manufacture and an underconsumption of many others. It is easy to see how we can produce more articles of Hardware, tons of coal and bushels of grain than are required by the needs of our people, for the consumption of such articles is not so much a matter of economy.

which leads them to buy one, two or three pairs of boots or shoes, or suits of clothes or new, it means 14,000,000 of such articles not sold by the manufacturer. Now certainly it will not help us to overcome the evils of such overproduction and under-production to open our market to the adarticles that we may save the money to our of it they lose a margin of profit which in own manufacturers which is now being sent these close times they need.

changes, and no two will pass the same key unless made to order. The list is as follows:

No. 648, with Plain Bronze Escutcheon \$25 No. 647, "Nickel-Plated \$25 No. 647, "

Cooley Mfg. Co., Jackson, Mich., of an open letter to the commissioner of customs of the the Tack market. The address was delivered at the monthly dinner of the Trade

Dominion of Canada, which we print below. kill Valley now controlled by Reading. The latter is said to have recently reduced the price Club, and is an able and forcible argument for the protection of American manufactor of customs for Canada to the collectors of also tolls 5¢ ? ton. The company accordof customs for Canada to the collectors of customs, in which he says: "This department is now in possession of two catalogue tariff legislation, and the facts and figures price lists of the above company, one expressly for Canada and the other for the United States, the difference in the prices of the Pennsylvania Railroad Company, which have been analyzed and the result is stated that "the action taken by shown in the following table. The persist- ors of the Pennsylvania was final and would ance with which this firm has in this and authority, according to a Philadelphia other ways endeavored to evade the Canacessive steps to 50 per cent.; thence by suc-the Canadian manufacturers and the honest which time there have been numerous reduc-tions, until now the average is from the contracts for the future desired contracts for the future d that collectors of customs shall not only ex ercise the utmost vigilance for detection of such frauds, but that they shall apply the severest provisions of the law when they are two edged sword and will find out what re detected." Then follows a tabulated state- taliation means.' ment giving the names of goods manufactured by the Withington & Cooley Mfg. Co. with the to market for the week ending January 10 American numbers, the Canadian numbers, and the American list prices and the Canadian list prices. In a foot-note, among other Bituminous Coal sent to the eastern markets matters, it is stated that the the first quality for the nine days ending January 10 above cannot be opened until those below ooo,ooo,ooo, as against \$14,000,000,000, is branded "Excelsior" for the Canadian amounted to 121,600 tons, compared with are closed, so there is no danger of getting 1860, and as against \$42,500,000,000, the

Whether there was any desire on your part to state facts correctly or not we cannot tell. The unwarranted and slanderous lan-

Our own name is always on them. No doubt Our own name is always on them. No doubt our Excelsior goods appear to the customs department as they do to the buyer, to be first quality goods. As compared with any Canadian or most American makes they are, If we have "evaded" any law or committed any "fraud" by making better goods of the respective grades than other American factories do or Canadian factories on "the respective grades than other American factories do, or Canadian factories can, "the very head and front of my offending hath this extent, no more." The career and standing of this house anywhere outside the oblique vision of the commissioner of customs is, I am proud to say, above reproach, and I challenge you to point to an act of Iraud it has ever committed.

Very respectfully. Very respectfully,

W. H. WITHINGTON, Vice-President.

We need not remind manufacturers, and of such articles is not so much a matter of economy.

On the other hand, a less number of boots and shoes and yards of cloth may be produced than are actually required by the demands of comfort on the part of our people, and yet every manufacturer of such articles in this country may have his factory people, and yet every manufacturer of such articles in this country may have his factory overstocked with goods he cannot sell. The consumption of these articles is strictly a matter of economy. It depends upon whether the people as a whole are profitably employed, and upon the extent of their confidence in the stability of public affairs, which leads them to have not these to have no such as they will be affairs, and as much better prices as they prices, and as much better prices as they please, to customers outside of the United States. While the commissioner of customs garments, in the course of a year. If one quarter of our people economize to the extent of one pair of boots or shoes, or one suit of clothes or one garment in the course of the year, no matter how much they need of the year, no matter how much help need of the year, no matter how much harticles. prevailing custom explains his misunderstanding in the matter, and the fact of his bringing this charge against the house. If he had been familiar with the ways of the marproduction to open our market to the admission of new competitors, producing goods under conditions of cost, particularly as to labor, so much more favorable than our own manufacturers. I believe we had much better scrutinize our list of imports to-day to see if there are not some goods being now brought into our country that can as well be produced here at horse, and if can as well be not than for their house trade. These is interested to the market of the ma brought into our country that can as well be produced here at home; and, if so, I would advocate an advance of the tariff on such many cases no necessity for it, and because

upon. Strenuous efforts will be made to secure united action. Until an agreement is secure united action. Until an agreement is formed prices must be irregular. Broken and Egg may be quoted \$3.25 (@ \\$3.75; Nut, \\$3 25 (@ \\$3.50, f.o.b. Bituminous is worth \\$3.25. The indifference of the Pennsylvania Railroad Company in reference to concerted action is said to be due to their intention of securing a portion of the trade of the Schuyl-Dominion of Canada, which we print below. ing to report, propose to close all their colieries in the Schuylkill region after a few days for the rest of the month.

A later report says the committee called on General Wistar, the general manager of not be reconsidered." It is stated upon good that representatives of the other patch. contracts for the future delivery of Coal at prices considerably below the ruling rates. 'This is done,' said a Pennsylvania Raffroad official, 'for the purpose of making us lower our prices, but somebody is playing with a

The total amount of Authracite Coal sent was 523,089 tons, compared with 335,426 tons in the corresponding week last year, an increase of 184,663 tons. The quantity of



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# Lloyd & Supplee Hardware Co.

PHILADELPHIA.

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IDEAL MOUSE TRAP. So perfectly simple in const-uction there is nothing to get out of order, as is the case with all other traps made on this principle. Guaranteed to give perfect satisfaction. Send for sample gross and you will not have any other trap that catches mice alive. The inventor of the Ideal invented all of the leading traps in the market today, and he says this one is perfection. Great care is taken in the manufacture of the Ideal, and every trap is perfect. A single trap for inspection will be sent by mail upon receipt of soc, in stamps.

The Cyclone Mouse Trap.

We invite the attention of dealers of his "Novelty" in Mouse Traps, attented Nov. 6, 185., and now aving an immense sale. It is near, durable and attractive, and sensitive that the mouse who entures to but touch his nose to



price is only to cents each, and yet they afford big profits to the dealer. We will send a sample by mail for inspection, upon receipt of five 3-cent stamps. Send for our Illustrated Casalogue.

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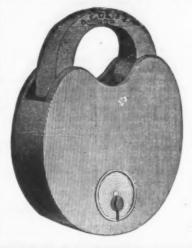
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### DEITZ.



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Morocco, Round Corners; 600 Pages; 408 Engravings Price, \$3.50.

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SAW SCROLL IF HE WILL GET READY FOR IT.

We now handle nearly all the Bracket Saw Blades which are used in this country, and also export large lots of them. The STAR BLADES we control, and are the New York Agents for the Griffin Bracket Blades. We also sell Wood, Designs, Clock Movements,





THE LESTER SAW and THE ROCERS SAW

have held their place against all comers, and are now the standard machines the world over. Since last year we have made FOUR great improvements on these saws—first, a new Rubber Blower, which gives as much blast as is desired; second, a new Clamp, tunnel-shaped, which guides the Saw to its place in the dark; third, a Roller inserted in the table at the back of the Saw, which makes it run as true as those which go in guides; fourth, a row Stretcher Rod, which gives the Saw a perfect adjustment. fourth, a new Stretcher Rod, which gives the Saw a perfect adjustment.

SEND FOR CATALOGUE.

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E. T. CANBY, Sec. and Treas.

WILMINGTON, DELAWARE,

New York Office, No. 90 John St.; Entrance on Gold St.,

BEST CHARCOAL

AND PLATE IRON GENERALLY. ALSO BEST QUALITY HOMOGENEOUS STEEL PLATES.

We ask the special attention of the trade to our C. H. No 1 Boiler Plates, which we manufacture expressly for the Shells of Steam Boilers and stamp 50,000 pounds T. S. when desired. One hundred and sixteen tests of this iron, made during the last three years by the U. S. Inspectors of Steam Vessels, show an average tensile strength of 58,808 pounds to the sectional square inch, and an average reduction of area of the fractured section of 30% per centum. Our prices are as low as the production of a good article will admit of.





DAY BROS. PORTABLE **FORGES** 

All sizes. The most improved and handiest,

Blacksmiths' Machines of all sorts. Send for full particulars.

419 A 421 N. 2d St., PHILADELPHIA, PA.



PURE TURKISH WALPOLE EMERY MILLS

South Walpole, Mass.

### English Letter.

(From Our Regular Correspondent.) LONDON, January 5, 1885.

THE NEW YEAR

has now fairly set in in one sense, but from a trade and commercial standpoint there has really been but little done up to to-day, whence the serious work of the 12 months may be said to date. At many of the iron and steel works a restart has not been made even now, owing to stock-taking operations and in some cases to an absolute want of orders, but I gather that in a general way a recommencement will be made during this week. It is found that there has been a certain accumulation of orders during the holidays, so that it seems probable that matters will continue to move on in much the old style. The quarterly meetings to be held a few days hence will afford opportunities for comparing notes and testing values, although there is no probability that the "list" rates will undergo any alterations. It is out of the question, of course, that there should be any advance, and the prime costs are already cut so fine that a reduction is declared to be impossible. The status quo will be maintained, therefore, for what it is will be maintained, therefore, for what it is worth, seeing that at no time these six or seven months past have quoted rates been in accord with actual selling prices. The outlook is not at all brighter than when I last wrote to you; indeed, the political situation appears to grow so complicated that people are discouraged and are disposed to take a very sleave, yield, the people are future. take a very gloomy view of the near future. Nobody knows why Great Britain should not continue at peace with all the world, but the air is full of rumors as to the intentions of France, the animosity of Germany, the irritation of Austria, the enmity of Russia and all the rest of it, so that commercial John Bull scarcely knows which way to turn in order to convert the nimble ninepence into the reliable shilling on a safe and sure basis. Even neutral men in politics confess to a sort of alarm at the peculiar symptoms by which we are surrounded, although they hope that the scare may prove temporary and of no real consequence to us as a nation of the conference of the surrounded of the scare may prove temporary and of no real consequence to us as a nation of the conference of the surrounded of or to our friends and relatives in Australasia and South Africa.

K.

THE IRON MARKET. in common with all other markets, has been in common with all other markets, has been uncommonly quiet this week. As a matter of fact, scarcely any business has been done, owing to the holidays, either in the open market or at the works; consequently my report must be of the briefest on the present occasion. Some interest has centered in the appual statistics as to picture at occasion. occasion. Some interest has centered in the annual statistics as to pig-iron stocks, &c., in different parts of the country, but the figures presented do not appear to be such as are likely to have any great weight upon the near future of the trade. The decrease of 14.000 tons in Scotland is, however, more satisfactory than had been anticipated, while the good shipments from Middlesboro' are in the same category. At the moment values remain unaffected, and the proximate course of affairs as regards crude iron will values remain unaffected, and the proximate course of affairs as regards crude iron will not be plainly apparent until toward the end of this week, by which time the Scotch holidays will have come to an end and business resumed. This week warrants have been quiet, closing on Wednesday last (when the market was suspended for the week) at 10.72 32 ton. Makers' brands of Scotch page are 6d. or so ?? ton easier. At Middlesboro' and elsewhere in the smelting districts values remain as of late, with a fair number of inquiries as to futures, but without any current sales of note. All sorts of manufactured iron are quiet, and work is generally suspended—in some instances without any pros-pect of being actively resumed unless orders should accumulate during the next week or ten days. I call Welsh common bars £4. 15/@£5 \$\varphi\$ ton for ordinary assortments, less 3 % discount for cash. Heavy wrought scrap iron is dull, both for home use and exscrap from is dull, both for home use and export, prices being £43 @ £44, f.o.b. London for picked lots. Old-iron rails are quiet, with few on offer, as the railway companies prefer to hold for better prices than those now obtaining. Freights are unchanged and nominal as regards Transatlantic rates. To Australia and the East recent quotations to the control of the not all the works being stopped. In reference to the proposed new departure at Wool wich, it is believed that the Government will not start the manufacture of steel forgings there, owing in part to the large private capital already embarked in the trade on the strength of implied promises of all the Gov-erment work, and in part owing to the impossibility of competing in prices with private manufacturers. Crop ends are called 50/@ 52/6 % ton, f.o.b., and old called 50/@ 52/6  $\Re$  ton, f.o.b., and old railway leaf-spring steel is neglected at 51/@ 52/ $\Re$  ton, net cash, c.i.f. New York. Steel rails are easier at the following association prices: D. H., £4. 15/ $\Re$  ton; flanges, 56 lb and over, £4. 17/6; 50 to 56 lb, £5; 45 to 50 lb, £5. 2/6; 40 to 45 lb, £5. 5/; 35 to 40 lb, £5. 7/6; 30 to 35 lb, £5. 10/; and 25 to 30 lb, £5, 12/6  $\Re$  ton. These quotations are for delivery on railway trucks at the various Ib, £5. 12/6 \$\cap\$ ton. These quotations are for delivery on railway trucks at the various works, the cost of putting f.o.b. ranging from 1/6 to 3/6 \$\cap\$ ton, according to the port of shipment. The success of the Denain-Anzin Company, in Roumania has given rise to the report that the association is likely to break up, but I am assured on excellent authority that such is not the case, the combination being as strong now as at any former period of its existence. It is suspected that the French makers are being used as instruments for "smashing the association" by parties who are opposed to it, but all such outside efforts are declared to be entirely futile.

futile. FREE TRADE AND FAIR TRADE.

In reference to the letters of Mr. Giffen of the Board of Trade, proving that free trade has greatly benefited us, the following is published by the National Review:

MR. GIFFEN AND JOHN BULL.

MR. G. "What right have you, Johnny, to grumble, And come gnashing at me with your jaws?" J. B. When I feel the inside of me rumble. I've a right to hunt after the cause,"

But, remember, all science has settled, And every great thinker has said——" J. B.

When the tail of a dog is tin-kettled Can he carry long tales in his head? MR. G.

MR. G.

It is proved by statistic deduction, And all Œconomics declare—"

J. B. That our industries thrive upon suction, The suction of nothing but air." Mr. G.

Well, the only thing real is reason; And to talk of your commerce betrayed, And your famishing country, is treason To the principles sound of Free Trade!"

J. B.

"By those principles sound I lie muzzled,
With my own tongue to chew, for my health;
And how can I help being puzzled,
When I was to have wallowed in wealth?" MR. G.

"But reflect on the bliss of your neighbor, And his joy in your money broad-cast; What you pay to enrich foreign labor Will come back to you, somenow, at last." J. B.

"Then the true way to save is to revel,
And the losel is millionaire;
Every guinea he flings to the d—l
Will be his again—when he gets there."

Mr. G.

'Away with this selfish dejection!
All nations grow rich by our ald,
And, wher they abandon Protection,
They will come to our views of Free Trade."

J. B.
Mr. Giffen,

But ere that, I shall starve, Mr. Giffen, And the Yankee will write on my tomb— His Trade is extinct as his Griffin, And I wove his shroud with his loom!"

SCOTCH PIG IRON has been very quiet since I last wrote, the warrant market having been closed from warrant market having been closed from December 31 up to this morning. The closing price of warrants was 42/3, and the average price for the year 1884 42/1½, against 46/9 in 1883 and 49/4½ in 1882. With regard to the statistics given by me elsewhere in this letter, I think it right to inform you that the figures are those of the Pict Leve Trade Association of Marchante. Pig Iron Trade Association of Merchants and Brokers. The ironmasters held a couple of private meetings to arrive at absolutely accurate statistics, but found that no returns had been made by several furnaces, including Summerlee, Govan and Calder, Clyde and others. The decrease in Connal's stocks last others. The decrease in Connai's stocks hat week was 8 tons only, and it appears likely that there will be an increment for some time henceforward. The chief feature of the trade at the moment is the continued heavy importation of Middlesboro' pig iron. Scotch makers' brands are about as last week.

ANNUAL STATISTICS

From among the heavy crop of annual statistics for 1884 which are being poured forth on all sides, I select the following as being most likely to interest your readers:

being most likely to in	erest your readers :
SCOTCH P	G IRON
Production Consumption—in foundri In malleable and steel w	es 287,000 285,00
(Quantity of malleable is iron and steel made 387,000; 1863, 427,000)	: 1884, 468,000 488,00
Exports—Foreign, 316,60 English fron transship timated), 3,400 Coastwise Railway to England	ped (es- 819,468 415,61 197,251 904.04
Total	584,000 647,00
Stocks— In Connal's stores Quantity in makers' has	579,423 584,13 nds 241,577 250,86
Total	821,000 835.00
Production. Consumption. Exports. Stocks.	15,000
Average price M/n warra: Average number of furn	1884. 1888. nts 42/136 46/9
blast Number of furnaces in b	95 110
December 25 Imports of English iron	93 108
and water Lowest price touched, Ju Highest price paid, Janua	tons, 369,000 482,000 ne 4 40/10 48/6
HEMATITE	PIG IRON.
Monthly Average Prices Cumberland Ports, for	
Y 23-1-	M W Y

Monthly Av						
Cumberla	na r	nres, re	ir the t	ast mi	r Yea	rs.
	Jan.	Feb.	Mar.	Apr.	May.	June
879	52/0	51/0	51/0	51/0	50/0	50/0
1880,	128/6	123/6	111/0	89/6	68/0	59/6
1881	65/6	64/0	61/0	58/0	55/6	55/6
1882	62/0	60/0	57/6	55/0	58/0	54/1
1888	59/6	59/0	58/6	51/6	80/6	50/0
884	46/6	17/0	46/6	46/0	45/6	45/0
	July.	Aug.	Sept.	Oct.	Nov.	Dec
879	49/0	48/0	54/0	67/6	71/0	98/6
860	64/6	76/0	70/0	65/0	64/0	68/
581	55/0	55/6	57/6	60/0	50/9	61/6
882	57/0	57/8	56/9	56/9	55/6	58/0
588	49/9	49/6	49/0	46/0	47/0	46/6
884	44/6	44/0	48/6	48/0	48/6	44/0
	18	79. 118	80. 188	1. 1882.	1883.	1884
Yearly avera			/6 59/		49/11	44/11
				1884	1. 1888.	. 1882.

Yearly average 57/41/2 81/ Number of furnaces in		56/7 49 1884. 1		
average		511/6	5734	68
December 24 Number of furnaces existing			56 81	60
Total make during 1886	ļ }		1,86	
	1884.	1888.	1 18	982.
Stocks in makers' hands	Tons.			ons.

Stocks in West Cumber-	241,020	141,110	1.44,1501
land Storing Company's store at Workington Stocks in West Cumber-	*52,189	40,892	41,226
land Storing Company's store at Maryport Stocks in Furness Railway	9,759	*** ***	
Company's store at Bar- row	69,757	27,185	12,100
Total	259,600	209,800	175,650
Shipments of hematite pig- iron, 12 months, ending Dec. 24 (coastwise) Shipments of hematite pig	882,481	408,419	457,955
iron, 12 months, ending Dec. 24 (foreign)	187,460	288,155	811,036
Total	569,941	646,567	769,002
Shipments of steel rails and blooms (coastwise). Shipments of steel rails	910,294	183,947	167,102
and blooms (foreign)	66,504	97,275	86,857
Total	277,198	261,222	258,459

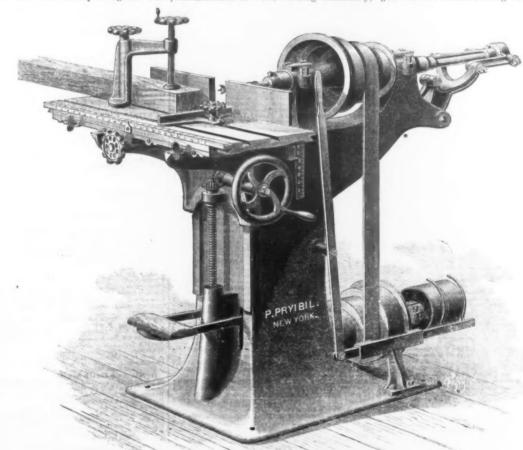
TIN PLATES.

near approach of the Birmingham quarterly meeting. I quote IC cakes 13/9 @ 14/3, and IC charcoals 16/3 @ 18/. There is reported a fair inquiry for Bessemer steel cokes, 14 x 1944, with buyers 14/3, f.o.b. Liverpool. At Liverpool the business in tin plates is still rather slow and dragging, though a quicker return to business was made than had been anticipated. There were numerous inquiries made on Monday, and these have been followed up moderately well during the succeeding days—that is, so far as inquiries are concerned—but the actual amount of business transacted has not been at all commensurate with the inquiries made. This, of course, is owing to the low figures that still rule, and nothing like a big business is entered at the low prices now offering all round for the various sorts of tin plates. What little there has been doing in coke tins has been mostly at 14/ for well-

Of refined petroleum alone the exports from New York, Philadelphia and Baltimore to Germany last year were 167,000,000 gallons, or about 37 per cent, of our total exports. The proposed increase of tariff rates would be equivalent to a discriminating tax of \$1,000,000 per annum against the American product. There are many substantial reasons why Germany should desire to check the imigration of her subjects to the United States, but this fact alone would hardly vindicate the barrel alone that actuates the moeting piece of apparatus, has a most interesting piece of apparatus, has a single barrel and is arranged in such a way that the force of the recoil from one round at the moment of firing the next round, and so on, round after round in succession To effect this the barrel alone that actuates the mochanism policy of retaliation.

### Horizontal Boring Machine.

this fact alone would hardly vindicate the barrel alone that actuates the mechanism wisdom of her Government in favoring a and enables the maintenance of a continuous fire. The barrel has a caliber of .150 inch and the gun, with its tripod stand, weight 126 pounds. It is about 3 feet high and 4 feet 9 inches long from muzzle to rear of firing mechanism. As it is self-firing, the operator



NEW HORIZONTAL BORING MACHINE

known brands, with 14/3 @ 14/6, IC, for the corner of Fortieth street and Tenth avenue, better class of plates. For the common grades 14/ is not obtainable, some outside large variety of work, including rosette cutbrands having exchanged hands again at a ling and mortising. The latter is done by a Slabbing and Key-Seat Milling. brands having exchanged hands again at a trifle less, and it is this sort of thing that keeps the market in such a depressed state as to prices. The brands which are in really good repute cannot be bought even at 14/, IC. Coke tin wasters are in fair demand, and, while 13/3 is the price for the general run of plates, there are odd parcels of 14 x 10 and 14 x 20 sold occasionally at 1½d. @ 3d. or so less. The demand for No. 2 quality or Bessemer-steel mand for No. 2 quality or Bessemer steel plates in coke grades is pretty good on the whole, though prices are down almost to the level of what is usually paid for good ordinary coke tins; 14/3 IC is what is now generally paid for these in most brands. There have been several orders given out at this price this week, and some ordinary sizes at a trifle less even than the above price. There is not so much demand for Siemens or There is not so much demand for Siemens or best steel plates in coke grades, and but a few orders have been placed this week at prices varying from 15/ to 15/3 IC. The inquiries for charcoal and best charcoal tinplates have not been many this week, and really there is little doing in either sort and no variation in the prices quoted last week. For ternes there is only a moderate business doing, and it is with difficulty that late figures have been maintained, the tendency of prices for these being again in a downward direction Well-known brands of good repute cannot be bought at anything less than 14/ IC, but there are some parcels offering for which a little less is occasionally taken. It is expected in some quarters that a heavy business will be brought off on Birmingham quarterly meeting day.

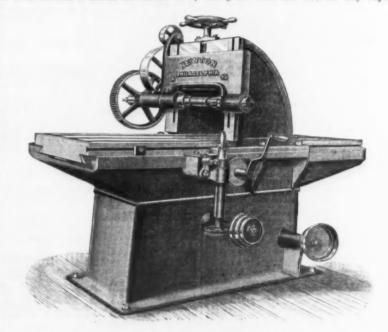
### The German Tariff.

The animus of German legislation prejudicial to the American export trade is not clearly apparent. Its primary object may be to protect home producers, or it may have an occult purpose in the creation of a sentiment hostile to emigration. In either case the effect is to embarrass international trade. American cereals and the petroleum interest are the most likely to suffer should Germany persist in the policy of exclusion, although the list of articles on which a higher customs tariff is proposed takes a tolercustoms tariff is proposed takes a tolerably wide range. Among the proposed changes in the German customs tariff the following duties will be imposed: Cotton twist, 48 to 120 marks. Wheat, 3 marks. Maize, 50 pfr-migs. Jute twist and manila hemp, uncolored and unpressed, 5 to 10 marks. Jute twist and manila hemp, colored and pressed vary. and pressed, 12 to 20 marks. Dressed varn and sewing thread, 70 marks. Cords and ropes, 10 marks. Salt fish, in barrels, 3 marks. Fish, otherwise prepared, 12 marks. Fish, in hermetically-sealed cans, 60 marks. Oil, in casks, 4 marks. Palm oil and cocoa-In London there is no change to report in the market, owing to the holidays and the lides for tanning are exempt from duty.

ting and mortising. The latter is done by a cutter cutting out both ends and sides, pro ducing, when the work is moved sideways, a mortise with half-round ends. The spindle is steel, fitted to a steel tube in which it revolves and in which it slides. The wear is thus confined to the tube, where it can be easily taken up by the adjustable caps. The spindle has a longitudinal movement of 6 inches, and is provided with an adjustable stop-collar. The table has a movement of 10 inches in the direction of the length of the

### Slabbing and Key-Seat Milling Machine.

The annexed cut illustrates a milling ma-The annexed cut illustrates a milling machine for slabbing and key-seat cutting, built by the Newton Machine Tool Works, of Philadelphia, Pa. The tool is turned out in three sizes, No. 1 having a carriage 4 feet long and 9 inches wide, and milling the entire length of the carriage; No. 2 has a carriage 6 feet long and 13 inches wide, and will also mill its entire length; No. 2 has a carriage mill its entire length; No. 2 has a spindle, to enable it to be set close to bitts of will also mill its entire length; No. 3 has a various lengths, and to enable the rosetto carriage 8 feet long and 18 inches wide. No. and mortising gutters to be used close to the 1 is generally used for cutting key-ways in bearings. It also has a vertical movement shafts up to 7 inches in diameter. Nos. 2 of 12 inches and a lateral movement of 14 and 3 are used not only for key-ways in



NEWTON'S SLABBING AND KEY-SEAT MILLING MACHINE.

inches. end-wheel in front, and its extent can be limited by two adjustable stops provided for the purpose. The table is provided with an adjustable square and miter gauge, an adjustable clamp and iron fence, with tapered dove ail ends for facilitating the application of pecial wooden fences, and with scales for setting to sizes. The hight of the treadle is adjustable, to enable the operator to set it low when boring shallow holes, so that he will not have to raise his foot unnecessarily high. The pulley is self-oiling, and the machine can be driven from above, below or from either side. The belt shifter may be used on either side of the machine. The weight is about 735 pounds.

The latter is effected through the engine and locomotive shafts, but also for slabbing and milling connecting rods and general slabbing. The arbor is so made that the cutters can be adjusted from right to left without removing them from the arbor or removing the arbor from the maarbor or removing the arbor from the machine. The carriages can be made to any desired length. The vertical adjustment of cutters is rapidly effected. Each machine has three changes of speed, and is strongly back-geared, giving great power. There are three changes of feed with automatic stop motion and quick return.

M. Niaudet has recently been experimenting with some success on the reduction of chloride of sodium (common salt) into its components by means of the electric current. Mr. Hiram S. Maxim's new automatic machine gun which, by simply pulling a trigger once, will feed itself and fire away at the rate of 600 rounds per minute, if desired, has of late received a good deal of attendance.

# Wholesale Hardware Prices, January 21, 1885.

	oloodio ili
HARDWARE.	Amidon's
	Amidon's. Bartholomew's, Nos. 25, 27, 30. Bartholomew's, Nos. 117, 118, 119. Barker'a Imp'd. Amidon's Corner Brace
A rviis.   Eagle Anvils American   F b 10€—dis 20   Wright's	% Universal
Armitage Mouse Hole, Extra. 1156 Trenton. 9 Wilkinson's. 9	Shelf, plain
A refley Carr, Patent Solid	Reading, Plain
Apple Parers. Advance.  Let Market Ma	List of June 25, 1883
Champion	Inch
Gold Medal. # dos \$5.00—dts 10 9 mproved Bay State. # doz \$30.00 Improved Bay State, with push off # doz \$33.00	Buil Rings. Union Nut Co
Jersey	Sargent's. Hotchkise' low list. Humason, Beckley & Co.'s. Peck, Stow & W. Co.'s.
Oriole # dos #7.00-dis 30 % Penn # dos #5.66 Rocking Table # dos \$7.00	Butts Wrought Brass
Trumph. # dox 85.50 Turntable, Original # dox 85.50 Turntable, Improved # dox 96.50	Cast Brass, Corbin's Fast Joint
White Mountain	Buts Wrought Brass. Cast Brass, Tiebout's. Cast Brass, Corbin's Fast Joint. Cast Brass, Coope Joint. Fast Joint, Narrow. Fast Joint, Narrow. Loose Joint, Japanned. Loose Joint, Japanned. Loose Joint, Japanned with Acorns. Parliament Buts. Mayer's Hinges.
1878 Quers and Bits.	Parliament Butts
Cook's, New Haven Copper Codis 50 & 60.10 %	Parliament Butle. Mayer's Hinges. Loose Pin. Acorns. Loose Pin. Acorns. Loose Pin. Acorns. Japanned Loose Pin. Acorns. Japanned Loose Pin. Acorns. Past Joint. Narrow Fast Joint. Lt. Narrow Fast Joint. Lt. Narrow Fast Joint. Broad. Loose Joint. Broad. Lingte Bind. Regular Inside Blind. Regular Inside Blind. Right Loose Pin. Wrt. Loose Pin. Wrt. Loose Pin. Light Bronzed Wrought Butts. Spring Hinges: Geer's Spring and Blank Butts.
Patent Solid Head dis 30 8 Lewis' Patent Single Twist dis 45 8 Puscell Lemings' August and Pits of all kinds	Fast Joint, Narrow
List of January 1, 1884	Loose Joint, Broaddi Table Butts, Back Flaps. &cdi Inside Rind, Begular
Car Bits, Snell Mfg. Co	Inside Blind, Lightdi
Expansive Bits, Clark's smail,\$18; l'ge,\$26. dis 331/56.35% Expansive Bits, Ives' No. 4, per doz., \$60. dis 356/35&5 % Expansive Bits, Blake's. \$20-dis 40 %	Bronzed Wrought Butts Spring Hinges: Geer's Spring and Blank Butts
Expansive Bits, Ansonia	spring ninges: Geer's Spring and Blank Butts. Union Spiral Spring, Japanned. Union Spring Hinge Co. **. American Spring Hinge Co. **. Gem Spring Hinges. Bungs Goute Actins. Union Mg. Co.
Hollow Augers, Douglass'	Gem Spring Hinges. Barker's Double Acting. Union Mfg. Co.
Hollow Augers, Ives' Expansive, each \$4.50.dis 45 @ 50 % Hollow Augers, Universal Expan., each, \$4.50—dis 20 % Wood'sdis 25 %	Bommer's Buckman's Empire
Gimlet Bits. #7.50 \( \psi\) gross, dis 50 \( \psi\) Gimlet Bits, Diamond \( \psi\) \( \psi\) dos. \( \psi\). (dis 25\( \phi\). (15 \( \psi\) Gimlet Bits, "Ree" \( \psi\). (dis 25\( \phi\).	Climax. Blind Butts, Parker
Double Cut Gimlet Bits, Shepardson'sdis 45 % Double Cut Gimlet Bits, Ct. Valley Mfg. Codis 30&10 % Double Cut Gimlet Bits, Hartwell'sdis 60 %	Blind Butts, Palmer Blind Butts, Seymour Blind Butts, Lull & Porter
Double Cut Gimlet Bits, Douglasss'dis 40 % Double Cut Gimlet Bits, Ives'dis 50 % Holtz Bit Stock Drillsdis 25&10 %	Blind Butts, Nicholson
Syracuse Twist Drill Co., Wood Drills,	Blind Butts. Manhattan Hardware Co. Blind Butts, Sargent's, Nos. 1, 3 Blind Butts, Sargent's, No. 12
Hollow Augers, Ives' Expansive, each #4.50.dis 45 @ 50 \$ Hollow Augers, Universal Expan, each, #4.50.dis 25 \$ Wood's	Buckman's. Empire. Acme. Climaxts, Parker Blind Butts, Palmer Blind Butts, Nicholson. Blind Butts, Nicholson. Blind Butts, Nicholson. Blind Butts, Huffer Blind Butts, Buffer Blind Butts, Sargent's, Nos. 1, 3, 6 di Blind Butts, Sargent's, No. 12. Blind Butts, Sargent's, No. 18. Blind Butts, Sargent's, No. 18. Blind Butts, Sargent's "Noiseless," 45 and 55. Blind Butts, Reading's Gravity, 65. Blind Butts, Shepard's "Gravity, 65. Shepard's Lud Porter Shutter Hings, Shepard's Lud Porter Shutter Hings, Shepard's Reverable Shutter Hings, Clark's Improved Shutter Hings, 5.
Patent Sewing, Long	Blind Butts, Shepard's "Gravity," 5
Awis, Brad Sets, &c.  Awis, Sewing, Common	Shepard's Lull & Porter Shutter Hinge Shepard's Reversible Shutter Hinges.d
Awis, Shouldered Peg.	Butcher's Cleavers. Humason & Beckley Mfg. Co
Awls, Handled Scratch. \$7.50 \( \pi \) gross-dis 35 \( \pi \)  Awls, Handled Scratch. \$7.50 \( \pi \) gross-dis 35 \( \pi \)  Awls, Socket Scratch. \$1.50 \( \pi \) doz-dis 25 \( \pi \)	Bradley's
Millers Falls Adj. Tool Handles	Bradley's.  Beatty's.  \$10.50 19.00 21.50 24.00 27.00 20.00  New Haven Edge Tool Co.'s.
Brad Sets, No. 42, \$10.50; No. 43, \$12.50 dis 70&10&5 % Brad Sets, Stanley's Excelsior, No. 1, \$7.50	Calipers. Can Openers. Messenger's Comet
Brad Sets, Stanley's Excelsior. No. 3, \$50, \ Axes.—Best grades	American # gro Duplex # dos 2 Lyman's # d
Axie (Frense. Frazer's, in bulkKog # b, 5¢: Paii, # b, 6¢ net Frazer's, in bulkKog # b, 5¢: Paii, # b, 6¢ net	No. 4, French
A xies.—Common	Star dine Scissors,
Awis. Handled Scratch. \$7.50 \( \psi \) gross-dis 35 \( \text{S} \) Awis. Socket Scratch. \$1.50 \( \psi \) gross-dis 35 \( \text{S} \) Aken's Sets. Awis \( \perp \) Tools. \( \psi \) dos-dis 25 \( \text{S} \) Aken's Sets. Awis \( \perp \) Tools. \( \psi \) dos. \( \text{S} \) dos-dis 25 \( \text{S} \) Aken's Sets. Awis \( \perp \) Tools. \( \psi \) dos. \( \text{S} \) 40.0—dis 50x10 \( \text{S} \) Millers Pails Adj. Tool Handles, No. 1. \( \psi \) dos \$12-dis 25 \( \text{S} \) Fray's Adj. Tool Handles, No. 2. \( \psi \) dos \$12-dis 25 \( \text{S} \) Brad Sets. No. 42, \$10.50; No. 43, \$12.50 \) dis 70x10x5 \( \text{S} \) Brad Sets, Stanley's Excelsior, No. 2, \$4.00. \( \text{dis 70x10x5 } \) Brad Sets, Stanley's Excelsior, No. 2, \$4.00. \( \text{dis 70x10x5 } \) Brad Sets, Stanley's Excelsior, No. 3, \$5.00 \( \text{dis 70x10x5 } \) Axes.—Best grades. \( \psi \) dos \$5.50 \( \phi \) \$7.60 \( \text{dis 80x10x5} \) Axes.—Pet grades. \( \phi \) dos \$5.50 \( \phi \) \$7.70 \( \text{dis 70x10x5} \) For all \( \text{C} \) Millers \( \phi \) Symmetry (0.50 \( \phi \) \$7.70 \( \text{dis 70x10x5} \) \$7.70 \( \t	"World a Best," # gross, No. 1, \$12.00 No. 3, \$36.00. Universal# dos
Pag Holders	Story   Stor
Hand, Extra Heavy     .dia 606a65 %       Hand, White Metal     .dia 70 %       Hand, Silver Chime     .dia 30%3334 %	Hicks & Goldmark's  F. L. Waterproof, 1-10's  E. B. Trimmed Edge, 1-10's
Hand, Globe (Cone's Patent).	E. B. Ground Edge, Central Fire, 1-10' Double Waterproof, 1-10's
Gong, Barton's   dis 40&10 %   Crank, Taylor's   dis 25&10 %   Crank, Brooks'   dis 50&10&2 %	G. D
Crank, Cone's   dis 20&10 %   Crank, Connel's   dis 20&10 %   Lever, Sargent's   dis 55&10 %	Musket Waterproof, 1-10°s. G. D. S. B. Genuine Imported. Eley's R. B. Eley's B. Waterproof. Central Fire. U. M. C., F. L. Ground. U. M. C., Cen. Fire Ground. U. M. C. Double Waterproof. Double Waterproof. Musket, in 1-10°s. Musket, in 1-10°s.
Lever, Taylor's Bronzed or Platest Lever, Taylor's Japanned dis 25&10 5 Lever, R. E. M. Co.'s. dis 50&10.22 5	U. M. C., F. L. Ground U. M. C., Cen. Fire Ground U. M. C., Double Waterproof
Pull, Brook's	Double Waterproof, in 1-10's
Cow, Common Wrought dis 60&10 % Cow, Western Sarvent's new list dis 60&10&10 &10	Central Fire
Cow, Kentucky "Star"	Cardis Golding Control Courty Cotton New Hist, Aug Wool.  Carpet Stretchers Cant Steel, Polished \$\psi\$ do Cast Iron, Steel Points \$\psi\$ dos \$\psi\$ booket \$\psi\$ do Bullard's.  Carpet Sweepers.
Nos. 1 114 2 3 4 5 6 7 Hog dia 70 5 10.00 9.00 8.00 6.00 5.00 4.00 8.00 8.00 8.00 8.00 8.00 8.00 8	Carpet Stretchers.
Farm Bells. \$\Pi\$, 3\langle \epsilon\$. Steel Alloy Church and School Bells	Cast Iron, Steel Points
Blacksmiths'   dia 50cc50&10 \$   Molders'   dia 40cc40&10 \$   Hand Bellows   dia 40cc40&10 \$	Carpet Sweepers. Bissell No. 5. New Drop Pan. Bissell No. 12 Hall Sweeper. Mystlc. Cottage
Belting, Rubber.—Standarddis 60660&5 \$ Extra	Bissell No. 12 Hall Sweeper
N. Y. Betting & Facking Co., Extra standard, dis 50 % Bench Stops.—Hotchkiss's \( \$\text{\$\texit{\$\text{\$\text{\$\text{\$\text{\$\texi{\$\texi{\$\texi{\$\texi\\$\$\texi{\$\texi\\$\$\text{\$\te	Mystac Cottage Garland Queen Queen, with band King
Morrill's \$\frac{1}{2}\$ dos \$\frac{10}{2}\$ dos \$\fr	King
Extension, Ives". \$\Psi\$ doz \$\pm 20.00 \dis 40 s\$\\ \text{Diagonal}\$ \$\Psi\$ doz \$\pm 24.00 \dis 40 s\$\\ \text{\$\Psi\$ doz \$\pm 24.00 \dis 40 s\$\\\ \text{\$\Psi\$ doz \$\pm 24.00 \dis 40 s\$\\\ \text{\$\Psi\$ doz \$\pm 24.00 \dis 40 s\$\\\ \text{\$\Psi\$ doz \$\pm 24.00 \dis 40 s\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Casters. Bed. Plate Shallow Socket. Deep Socket. Yaie Casters, reduced list May, 1884 Martin's Patent (Phenix). Payson's Anti friction.
Blind Adjusters. # per dos \$3.00—dis 50 g Excelsior # dos \$16.00—dis 50&10&2 g	Yaie Casters, reduced list May, 1884
Blind Fasteners.  Mackrell's	Cattle Leaders. Humason, Beckiey & Co.'s
Van Sand's Old Pattern	Cattle Leaders. Humason, Beckley & Co.'s
Salisbury & Austin No. 2008. By gro. net Security Gravity. By gro. net Blind Staples.	Chain. Frace, 614-10-2
Security Gravity	German Halter Chain, list of June, 1884 German Coll, list of June, 1881
Reed Mrg. Co. Self-Lubricating	Chain. Trace, 634-10-2. P pair 70¢ of Trace, 634-10-3. P pair 70¢ of Trace, 634-10-3. P pair 70¢ of Trace, 7-10-2. P pair 85¢ of Serman Halter Chain, list of June, 1884. German Coll., list of June, 1884. Ragitah Coll. 3-16 4 5
DOING   Constitute   Constitu	Covert Halter, Hitching and Hreast Meneely's Breast, Halter and Hitching
Wrought Barrel dis 60&10 @ 70 5 Wrought Square dis 60&10 @ 70 5 Wrought Square dis 60&10 5 Wr't Shutter, all Iron, Stanley's list, dis 50&10&10 \$ JWr't Shutter, Brass Knob, Stanley's list, dis 25&10&10 \$	Jack Chain, Iron
Wr't Shutter, Brass Knob, Stanley's list.dis 25&10&10 g Wrought Shutter, Sargent's list dis 60&10 g Wrought Sunk Flush, Sargent's dis 60&10 g	Chalk. White
Wrought Sunk Flush, Stanley'sdis 40&10 \$\frac{1}{2}\$ Wrought B. K. Flush, Com'n Stanley'sdis 55 \$\frac{1}{2}\$ Fire, Common, list Feb. 28,1883dis 70 \$\frac{1}{2}\$ 70&10 \$\frac{1}{2}\$	White. Sted Slue White Crayons Chalk Lines—See Lines Chiscls Okite Framins, Firmer. &c
Wrought Shutter, Sargent's list	Chisels. locket Framing, Firmer, &c
R. B. & W., Carriage, old list	ocket Framing, Firmer, &c
11   11   12   13   14   15   16   16   18   16   18   16   18   16   18   18	anged Firmers anged Firmers, Butcher's anged Firmers, Spear & Jackson's anged Firmers, Buck Bros.
solt Ends dis 75&10&5 @ 80 s F	ron Providence Tool Co 's Wrought Iro
Boring Machines. Upright. Angular.	ron, Adjustable, Lambert'sron, Adjustable, Snow's
First quality. no Augers. 2, 50 6 7.26 dis 50 6.5 5 1 Phillips, with Augers. 2, 50 6 7.26 dis 50 6.5 1 Jennings & Co., no Augers. 5.50 6.78 dis 50 5 1 Saunders' Pat., Reg., Red. 8, 50 — dis 50 5 1 Saunders Pat. Extra Bed. 6, 50 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 3, 00 dis 20 7 1 Biblioteff Pat. Reg. 2, 50 dis	ron, Capriage Makara' Sassatia
Saunders' Pat., Reg. Bed. 6.00 —dis 20 % In Saunders Pat. Extra Bed. 6.50 —dis 20 % In Bow Pins Science Scienc	ron, Eberhard Mfg. Co
Bumason, Beckley & Co.'s, Nos 1 and 2	orway or Best
Hotchkiss dis 30 \$ Becces.	ron, Adjustable, Stearns' ron, Cabinet, Sargent's ron, Carriage Makers', Sargent's day Clampe, Mrg. Co. d. Clips, Axle. forway or Bost. uperfor Coal Vases, suffalo Palace, S. & Co. suffalo Common, S. S. & Co. fockeyes. Cocks, Brass. acking.
O. 8. Backus dis 50&10 g Barber's dis 40&0 0 40&10 g Spottard's Patent dis 50&2 g Ives' Patent Braces dis 50&10 g Common Ball, American dis 55 g	Cocks, Brass. acking.
lves' Patent Braces	acking lobe lain Bibbs le and Boer

olesale Hardw	18
Amidon's dis 5 Bartholomew's, Nos. 25, 27, 30 dis 50& Bartholomew's, Nos. 117, 118, 119 dis 60 dis 60 dis 70 dis 60 dis 6	0 % 5 % 5 % % 5 % % 6 % 0 %
Bruckers	0%
Broilers,—Henis' Self-Basting.   10 9 x 11	5.8
Butts	MANAN X
Butts	KANANANA
Fast Joint, Narrow   dis 60&7/4&10	AMMMMMANA
Geer's Spring and Blank Buts	AMMMMA
Union Mig. Co.   Glis 25	**************************************
Bommer's	NAM NAM M
Blind Butts, Shepard's "Gravity," Nos. 1, 3 and 16 70k103k10 80. North's Automatic Blind Fixtures, No. 2, for Wood, 50: No, 3, for Brick, 810.50. Shiepard's Lull & Porter Shutter Hinges, dis 50:80825 Shepard's Reversible Shutter Hinges, dis 70k10k10610680 Clark's Improved Shutter Hinge, Nos. 0, 1, 134, 2, 2%, 3.	X BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
### Butcher's Cleavers	BRRRR
Cialinama San Compagno	
Manager   Persers   Woos \$3.00, dis 25	MNEAT
	W Bi
1. B. Genuine Imported.       4.56         Sley's R. B.       50¢         Sley's D. Waterproof, Central Fire.       50¢         J. M. C. F. C. Trimmed.       50¢         J. M. C. F. L. Ground.       70¢         J. M. C. Cen. Fire Ground.       70¢         J. M. C. Double Waterproof.       \$1.40         Jouble Waterproof.       \$1.40         Louble Waterproof.       \$1.0°s.         Louble Waterproof.       \$50¢         Cartridges.       \$50¢	Bo Fe St. Fr W A1 Me
tim List of Jan. 1, 1884—dia 50&10400 \$  entral Fire " dis 83¼440 \$  entridge Shells dis 20 € 25 \$  Cards torse and Curry dis 10 \$  totton New list, Aug., 1888, dis 10 \$  totton New list, Aug., 1888, dis 10 \$	J. J. Se Se Se
Carpet Stretchers.         # dos #8.00, dis 30 g           aat Steel, Pollahed.         # dos #8.00, dis 50.85 g           ast Iron, Steel Points.         # dos #8.00, dis 50.85 g           cocket.         # dos #8.50, dis 25 g           ullard's.         dis 25 g           Carpet Sweepers.         # dos #18.00	J. J. Me Bu Be Ch
ysuc. \$\psi\$ dos \$15.00 \\ arland. \$\psi\$ dos \$15.00 \\ arland. \$\psi\$ dos \$15.00 \\ ueen. \$\psi\$ dos	KE KE KE CINCON
Casters.  date	Do Ge Cro d She She She Cla
Cattle Leaders. umason, Beckiey & Co.'s	Cor Bu Par Par Plar Plar
erman Coll, int of June 1001	Bull Bull Bull No.
Press   Haler, Trailing and Hitching   dis 502:05	Win Win Name
Chalks. Press. Chalks. 9 gro 55e dd. 9 gro 55e dd. 9 gro 65e de 9 gro 65e de 10 gro 65	Dot Dot Be G Tin Far Far G Sar
nged Firmers, Spear & Jackson's \$5.00 to £ mged Firmers, Buck Bros	Bes U. J U. J U. J U. J U. J U. J U. J U. J
Marting   Sargent   Cli   Soc   Cli   So	Gris Star Ha Cov Cov Cov Mer
rway or Best	Mot Hi May Che Har

uun	ale illues, s	ialiual y LI, IU	00.
dis 50 &dis 60 &dis 60 &dis	Coffee Mills. 5 Board and Box	Buffalo Hammer Co. (Kip's)	Walker's Forged, Light, Med. or Heavy   1
dis 00 @ 00&1 30&10 @ 40&1 dis 51 dis 30 dis 40	Webb's Patent dis	0.\$   Verree	Mule Shoes.
dis 50&10&10 dis 60&10	Oalipers         dis 60&108           Jy Iders         dis 60&108           Beinis & Call Co.'s Dividers         dis 608           Beinis & Call Co.'s Compasses         Calipers         dis 508	15   Nelson Tool Works   dis 40&214	et Novelty Ice Breakers
dis 60&10&10	Semis & Call Co. % Wing & Inside of Outside dis Societies & Call Co. % Dottble	75 Tower's	<ul> <li>S Ice Mallets, Pick in handle ♥ doz \$2.00, dls 15 Ice Axes, Small Cast or Malleable. ♥ doz \$1.25, dls 20 Combination Ice Tools ♥ doz \$2.00</li> <li>★ Ace Ece Pick and Tongs ♥ gross \$55.00, dls 50&amp;10</li> </ul>
10 9 x 11 .50 6.50	J. Stevens & Co.'s Calipers and Dividorsd's 95&1 Coopers' Tools. Bradley'sdis 2 Barton'sdis 2 L. J. I. Whitedis 90&	Tower's   Als 22	Inc Cream Freezers. dis 45 American, Crown and Star. dis 55 Buffalo Champion dis 50&10 Let Tanga. dis 50&10
dis 50&10dis 60&10dis 30 .dis 70 @ 70&5 .dis 50&10	Albertson Mfg. Co	Sarn Door   Gos. 81.20, dis 10c. 10c. 10c. 10c. 10c. 10c. 10c. 10c.	Ce Tengs   Champion, S. S. & Co.   P doz \$4.00, dis 25&10
dis 80 @ 80&5 dis 40 dis 20&10 dis 10&10	S Bradley's	5 %         Saw and Plane	Brass larger than 17 Inches
dis 60&10 dis 60&10 .dis 70@70&10 .dis 70@70&10	Grain. dis 40& Crow Bars. Cast Steel. Pb 5 Iron, Steel Points. Pb 5	5 % Hickory Firmer Chisel, large .	Manives   dis 25
dis 70@70&10 dis 70@70&10 dis 70@70&10 dis 70@70&10 dis 70@70&10	% Fitch'sdis 50&1	Socket Framing Chisel, assorted	Knobs. Garriage, Japanned
dis 70@70&10 dis 60&75&10 dis 60&75&10 dis 60&75&10	Curtain Pins.  Silvered Glass.  White Enamel.  Cutlery.	Patent Auger, Douglass'	bot Door Mineral
60&10&10&214 dis 60&714&10 dis 60&714&10 dis 60&714&10	* American TableNet price	Hangers	Hemacite Door Knobs, new list. dis 50x5-
80&10&10&2% dis 60&7%&10 dis 40&6	Embossed Gilt.   dis 30&10   Leather	Challegon   Medina Mfg Co.   \$15.00, dis 50	Melting, Sargent's
dis 3314 dis 25 dis 25 dis 30 dis 30 dis 20&10	Gray's   Kod, regular size	Vetor, No. 1, \$15; No. 2, \$16.50; No. 3, \$18. dis 35% Cheritree. dis 50x6.5	Metting, P. S. & W.   dis 30x10
dis 25	No. 2, medium, Japanned # dos 2.70 \ dis 50&10  No. 3, Small, Japanned # dos 2.00 \  Star (Coll)—For Cop'd, Nickel-Plated, &c., see list,  No. 4, "Shoo Fly") Screen Door size # dos 2.50	Cronk	Tubular, Lift Wire, No. 1, \$\psi\$ doz. 10.56 Guards for Tubulars, add \$\psi\$ doz. 25 Police, Small, \$6.00; Medium, \$7.25; Large, \$9.75 dis 10@15 \$
dis 50&10	No. 5, Screen Door size	Hamlton Wrought	Porter's Tin R. R.
dis 70&2 dis 80&10 dis 45&10 dis 50 75&10&2 @ 80	[ Cowell's No. 1 # dog \$18.00 · No. 9 \$15.00 dts 50	Harness Suaps.  Anchor (T. & S. Mrg Co.).  Henshaw's, list of 1½ changed to \$14.00. dis 65  Judd's, list of 1½ changed to \$14.00. dis 65  Fitch's (Bristol), list of 1½ changed to \$14.00. dis 65  Hotchkiss dis 10  Andrews dis 50  Repent's Patent Guarded. dis 70&10&10  German, old list. dis 70&10&10 @ 60&10&10  German, Sargent's new list. dis 60&10 @ 60&10&10  Govern dis 50  Covert.	Eureka, Tinned.
dis 75&10 9	Shaw Door Check and Spring.   dis 26 @ 80 @ 35	Sargent's Patent Guarded	Senings   Star   Stor   Goz. net
08. 50, 60, 65, 18. 80 @ 80&10; 08. 1, 3 and 0&10&10 @ 80; 2, for Wood,	Matrous.   dis 90a210   Watrous.   dis 20 ab.     L. & I. J. White.   dis 20 ab.     Bradley's.   dis 30 ab.     Adjustable Handle.   dis 20	German, Sargent's new listdis 60%10 @ 00%10%10 GO 00%10 (dis 50 ) Covert, New Patent, new listdis 60%10 3 Covert, New Patent, new list. Oct. 1882dis 60%10 3 Meneely's Pat. Safety (Old German list)dis 60%16 3 Meneely's Imp. German (Old German list)dis 60%10 3 Machet's	Lines. Line Fish. Cotton Chalk.  Silver Lake, Braided, Nos. 0, \$6.00; No. 1, \$6.50; No. 2, \$7.00. No. 6, \$6.00; No. 1, \$6.50; No. 2, \$7.00. No. 6, \$6.00; No. 1, \$6.50; No. 2, \$7.00. No. 6, \$7.00. No
.dis 80@80&5 9 70&10&10@809 1, 136, 2, 236, dis 70 9	Blacksmiths' Self-Feedingeach, \$7.50, dis 20	Hatchets    Hatc	Linen Fish   dis 25&10 5
dis 25 %	Breast, Wilson's dis 25 Breast, Millers Falls each, \$3.00 dis 25 Breast, Bartholomew's each, \$2.50, dis 25&10 Ratchet, Merrill's dis 25&10	Hunt's   See 1   See 2   See 3   See 5   See	Locks, Padlecks, Cabinet Locks, &c. Door Locks, new list, Dec. 10, '84
7 8 3.50 36.50 dis 40 % See Compasses	Hatchet, Ingersoli's	Shingling, Nos. 1 2 3	Barnes Mfg. Co   dis 40 5     Yale Flat Key   dis 30 5     Diets Flat Key   dis 30 5     Stoddard   dis 30 5
\$3.00, dia 25 \$ \$6.00, dia 30 \$ \$, dia 15 @ 20 \$ \$3.75, dia 20 \$	\$12.00. dis 20&10 Wilson's Drill Stocks. dis 10 Automatic Boring Tools. each, \$2.25, dis 20 Drill Chucks.	Lathing, Nos. 12 3.	Round Key Latches
92.25, dia 55 % 96.00, dia 30 % \$2.50, dia 10 % \$7.00, dia 55 % 00, dia 25 % 5	Morse's Adjustable	Lathing, Nos. 1 2 3 Pdos 7,50 8.25 9.00 Lathing, Solid Steel. dis 30 5 No. 1, \$12. Boston Pattern, \$18. C. Hammond & Son. dis 45 @ 50 5	Cabinet, P. & F. Corbin. )       1884, dis 45&2 % cash.         Cabinet, A. E. Deitz.       dis 30@40 %         Cabinet, Stoddard Lock Co.       dis 30         A. E. Deitz, Flat Key Drawer       dis 30@40 %         Vale new list       dis 30@40 %
50.dis 50&10 % No. 2, \$34.00; dis 50&10 % .00, dis 35&5 %	Breast, F. S. & W	Shingling, Nos. 1 2 3	Reading Hardware Co. (rev. list Jan. 2, '94). dis 004:10 s
\$2.50, din 45 % \$2.00, dis 50 %	Emery.  Regular numbers. \$\psi\$ \$\text{8}\$ \$\text{8}\$ \$\text{8}\$ Flour and \$F\$. For each Cloth, see Sand Paper, \$\psi\$ \$\text{8}\$ \$\text{6}\$ \$\text{6}\$ \$\text{5}\$ \$\text{6}\$ \$\text{6}\$ \$\text{5}\$ \$\text{6}\$ \$\text{5}\$ \$\text{6}\$ \$\text{6}\$ \$\text{5}\$ \$\text{6}\$ \$\text{7}\$ \$\	8 simmons	Russell & Erwin Mailory, Wheeler & Co Nimick & Brittan Mfg. Co Wm. Wilcox & Co Norwich Lock Co 1884. dis. 70&2 %
00¢ 65¢ 70¢ 1.40	Ware.	Shingling, Nos. 1 2 3 # dos \$5.50 \$6.00 \$6.50 Claw, Nos. 1 2 3 # dos 6.00 6.50 7.00	Russell & Erwin   FADOCES
	Recutcheons   Lock   Same discounts as Door Lock   Same discounts as Door Lock   Brass Thread   dis 56   Wood   dis 25   Februs   dis 40	Chineting Nos 1 2 2 2 Acr \$6 00 \$2 50 \$0 00	"Horse Shoe," \$\pi\$ dos., \$\pi 9
50¢ 70¢ 70¢ dis 25 %	Brass   Inread	Broad, Nos. 12 S. \$\psi\$ doz 10.00 11.00 18.00 Broad, Nos. 45 6. \$\psi\$ doz 16.50 18.00 Ax Pattern. Nos. 12 S. \$\psi\$ doz 10.00 11.00 12.00 Hay Kulves.  "Lightling". \$\psi\$ doz \$18, dis 10 \$\frac{1}{2}\$	Nock's
in 50&10@60 % din 3316@40 %	Anchor Lock         dia 45 %           Metallic Key, Leather Lined         dia 60 %           Cork Lined         dis 00 %           J. Sommer's Best Block Tin Key         dis 46 %           10 s 00 %         dis 40 %	Electric.	M Hietas. dis 10&10&5 % Lignumvitse. dis 10&10&5 %
.dis 20 @ 25 %	J. Sommer's Cork Lined, 185 quarry dis 50 g J. Sommer's Diamond Lock dis 40 g Self-Measuring, Enterprise \$\Phi\$ dox \$36.00—dis 20&10 g Self-Measuring, Lane's \$\Phi\$ dox \$36.00—dis 20&10 g Self-Measuring, Victor. \$\Phi\$ dox \$36.00—dis 25&10 g	Heath Patent.	Penned Hote Co., Lignumvitæ and Hickory. dis 30 5 Mest Cutters. 1 2 3 Dixon's (P. 8, Wa.) Nos 1 2 3 Miles' ChallengeNos. 1 2 3 \$\times\$ 000\$\times\$2.0 \$0.00 \$40.00\$—dis 40 5
dia 10 % 85.00, dia 30 % 00, dia 50&5 %	Felloe Plates	Gate, Automatic	Dixon's (P. S. W&.) Nos   1   2   3
\$2.50, dis 25 % dis 25 % dis 25 % dos \$18.00 dos \$19.00	Butcher. New list, dis 20 6 Best Files of domestic make dis 60 6 60&10 5 Cheaper domestic Files dis 60&10 6 -5 New Am, File Co., Pat. Tapers dis 66 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Gate, Snepard**, No. 3.	Each\$50.00 75.00 80.00 225.00 400.00—din 20 % American
₩ dox \$42.00 ₩ dox \$17.00 ₩ dox \$15.00 ₩ dox \$19.00	Stubs   Gis 25 @ 30 %   Finting Machines   Knox, 4½-inch Rolls   \$3.00 each   dis 35 % Knox, 6-inch Rolls   \$3.00 each   dis 35 % Eagle 34-inch Roll   dis	Rolled Plate.	Nos. 10 12 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
. P doz \$16.00 . S doz \$18.00 . P doz \$30.00	Eagle, 514-inch Roll 2.85, die 35 g Crown, 44 in., 83.50; 6-in., \$4.00; 8-in., \$8.50 each, die 35 g Crown Jewel. 6-in., \$8.50 each, die 35 g American, 5-in., \$3; 6-in., \$3.40; 7-in., \$4.50 each, die 35 g	Heavy Weided Hook   14 in. & up. # B   28 fc   14 in. # dos \$1.50   dis   4 in. # dos \$1.50   dis   4 in. # dos \$2.46   dis   4 in. # dos \$2.86   10 fc   10	Kieser's Monarch. \$45 % dos, dis 40 % Kieser's Butcher. \$40 each dis 20 % Silver & Deming dis 25 % Pennsylvials dis 40 & 10 % Nos. 1 8 % 40 % Nos. 1 8 % 40 & 10 % Nos. 1 8 % 40 % Nos. 1 8 % No
dis 45 %		Hoes. Garden, Mortar, &c	# dos
dis 40&10 \$dis 60 \$dis 70&10 \$dis 60&10 \$	dos. dis 30 shepard Hand Fluter, No. 85 w dos \$15.00, dis 30 shepard Hand Fluter, No. 110 # dos \$15.00, dis 30 shepard Hand Fluter, No. 95 w dos \$8, dis 40 start Hand Fluter of the start	Hoes.  Garden, Mortar, &c	Beet Savers (Enterprise attg. Co.).   dis 20&10 %   Miucing Knives.   Am. (2d quality), % gro, 1 blade, \$7; 2 blades, \$12; 3 blades, \$18.   Net Lothrop's   dis 20&10 %   Smith's, % dos, Single, \$2.00; Double, \$3.   dis 40 %   Molasses Gates.   dis 40 %   Molasses Gates.   dis 80 %   Steebblas   Fatterns   dis 80 %   Steebblas   Fatterns   dis 80 %   Steebblas   Fatterns   dis 80 %
dis 30 %	Fluting Scissors	Stove Hollow-Ware, Grounddis 60 % Enameled and Tinned Hollow-Ware— Kettlesdis 60 % Owal Bollors Saucepans and Glue Potsdis 40 %	Steebolms   Patterns   dis 80 5     Steebolms   Genuine   dis 76 5     Steebolms   Genuine   dis 40&10 8     Chase's Hard Metal   dis 50&10 8     Bush's   dis 90 5     Lincoln's Pattern   dis 70&10 2     Weed's   dis 20&10 2
50&10 @ 60 % dis 55&5 % dis 55&5 %	Piated, see Spoons.  Freezers. Buffalo Champion, S. & Codis 50&10 % Fruit and Jelly Presses. Enterprise Mg. Co	Galvanised Tea-Kettles— Inch	97.00 8.00 9.00 10.00 M dow die 60610510 m
7-16 .05¼ .04¼ 7-16 .04¾ .04¾ dis 35&5 %	Burnished list as follows, 8. 8. & Codis 70@70&5 No	Hooks.  Bird Cage, Sargent's list.  dis 60&10&10 5 Bird Cage, Reading.  dis 50 8 Bird Cage, Reading.  Value of the state o	Money Drawers   Oct 518.00
dis 50&10 % dis 45 % D 6¢ @ 656¢ 170 @ 70&5 % dis 65&10 %	Gauges. die 60&10 s Wire. Wheeler Madden & Co. die 10&10 s	Clothes Line, Sargent's listdis 65&10&10 \$	Nati Puller.
# gro 55¢ # gro 65¢ # gro 90¢ ro 12¢ @ 18¢	Gimieta   Gis 50&10&5 g     Nail and Spike   Gis 50&10&5 g     Eureka '' Gimieta   Gis 40&10 %     '' Diamond '' Gimieta   Gis 40&10 %	Clothes Line, Rargent's list. dis 60&10&10 % Clothes Line, Reading list. dis 50&10 % Celling, Reading list. dis 60&10&10&10 % Harness, Reading list. dis 40&10&10&10&10&10 % Coat and Hat, Sargent's list. dis 40&10&10&10&10&10 % Coat and Hat, Rargent's list. dis 40&10&10&10&10&10 % Coat and Hat, Rargent's list. dis 40&10&10&10&10&10 % Coat and Hat, Rargent's list.	In lots less than 100 b, # b add 34¢ to list; 1 b boxes, if to list. Square Nuts
75@75&10 % 15 @ 65&10 %	Double Cut, Vice	Wire Coat and Hat, Gem	In lots less than 100 %, \$\psi\$ add \$4\phi\$ to list; 1 \pm \text{ boxes, i.e. to list.} }  Square Nuts.
dis 30 % .dis 65&10 % edis 25&5 % s 45&5@50 %	Cimetes   Saland Syles   Sistem   Sis	Ceiling, Sargent's list. dis 60&10&10&10 5 darress, Reading list. dis 40&10&10&10&10 5 darress, Reading list. dis 40&10&10&10&10 5 dost and Hat, Sargent's list. dis 60&10&10&10 5 dost and Hat, Sargent's list. dis 60&10&10&10&10 5 dost and Hat, Reading, dis 40&10&10&10 5 dost list. dis 60&10&10&10 5 dost list. dis 60&10 6 dost list. dis 60&10&10&10 6 dost list. dis 60&10&10&10 6 dost list. dis 60&10&10&10&10 dost list. dis 60&10&10&10&10 dost list. dis 60&10&10&10&10&10 dost list. dis 60&10&10&10&10&10&10 dost list. dis 60&10&10&10&10&10&10&10&10&10&10&10&10&10	Navy
\$4.75 @ \$5.00 \$5.00 to £ dis 30 \$			Others.         dis 60&10 %           Zinc and Tin.         dis 50 %           Brass and Copper.         dis 50 %           Malleable (Hammer's), No 1, \$3.25; No. 2, \$3.69; No. 3, \$4.00 % dos.
dis 20 % dis 20 % dis 40&5 % dis 40&5 % dis 20&10 %	Reading Hardware Co.     .018 3836210 @ 50 g       Gau Wands.     .18.60       U. M. C. B. E., 11 up.     .1.86       U. M. C. B. E., 9210.     .1.88       U. M. C. B. E., 9220.     .1.90       U. M. C. P. E., 11 up.     .2.50       U. M. C. P. E., 11 up.     .2.50       U. M. C. P. E., 12 up.     .2.50       Eley's B. F., 78B.     .4.00       Eley's P. E., 11 up.     .1.76       Wanck Staws.     .880	Nos. b 6 7 8 9 10  Ausable \$\psi\$ 31\$\epsilon\$ 28\epsilon\$\epsilon\$ 26\epsilon\$\epsilon\$ 26\epsilon\$\epsilon\$\epsilon\$ 26\epsilon\$\epsilon\$ 26\epsilon\$\epsilon\$ 26\epsilon\$\e	Others.  Zinc and Tin
404:5 @ 50 % See Vises	Eley's P. E. 11 @ 30 2.80  Lack Saws. Grimn's Hack Saws, complete dis 40&10 s Grimn's Hack Saw, Blades only dis 20&10 s Star Hack Saws and Blades dis 30 s dis 30 s	Putnam. ** * * * * * * * * * * * * * * * * *	Rroughton's Zinc
.dia 60&10 % .dia 70&10 % .dia 30&10 %	Star Hack Naws and Blades	C. BK	reaca rarers.  Rotary Knife. # doz fib, dis 10 g  Diamond State. # doz fib, dis 10 g  Pencils.  Faber's Carpenters'bigh list, dis 50 g
dis 50 \$ dis 50 \$ dis 60 \$	Mencely's Pat. Rope and Web. dis 40&10 % Mencely's Horse and Cattle Ties. dis 40&10 % Hammors. dis 40&10 % his 85 % Catenoy's, new list, March, 1868. dis 20&10 %	Horse Nails. 6 7 8 9 10  Ausable	Pencils.  Faber's Carpenters'
dis 60 \$	Maydole's. dis 25 5 Cheney's, new list, March, 1885. dis 20210 5 Hartford Hammer Co.'s Nail Hammers. dis 20210 5	Busies.  Busies.  R. I. Borse Shoe Co., Perkins' Imp. Light.  Medium and Heavy.  Fig. 1. Eorse Shoe Co., Perkins' Fig. 1. Eorse Shoe Co., Perkins' Imp. Light.	Picks. Railroad, 5 to 6, \$11.00; 6 to 7, \$12. dis 60&5 @ 60&10 5 Adze Eye, 5 to 6, \$12.00; 6 to 7, \$13. dis 60&5 @ 60&10 5

	4114	IUI	J	la	•,	10	
0 4	Buffalo I	Hamme	r Co. (Ki	p's)		dis 30 @ 3	5 %
5%	Humason Verree	n & Beck	kley	. 1. 25. 1.	50 and	dis 30 @ 3 lis40&10 @ 5 dis 15 @ 2 dis i.75.dis 25&1 dis 40&1 dis 10	0 % 5 %
5 %	Nelson T Warner	ool Work Noble	s			dis 40&1	0%
5%	Wilkinso Heavy H	ammers Cuffa	ths' and Sle	dges	di	11% # 76 n 18 60 @ 60& 10	et 0 %
2 2 2	Provider Provider Tower's.	ice Tool	Co., Har Co., Leg	d Cuffs, Irons,	\$15.00 25.00 ₩	dis 40&10 dis 10 dis 40&10 1156 \$\phi\$ by b b is 60 \$\phi\$ 60&10 \$\phi\$ dozdis 1 dozdis 20	0% 0%
2 2 2	Hand Nos	les.—D	0 1	numb La	tches. 3	dos. dis 1  dis 2  4  50. dis 60&10  55¢ @ 40¢ n  70¢ @ 80¢ n  70¢ @ 80¢ n  40, dis 10&16  dis 60&10  dis 60&10  dis 60&10  dis 60&10  forse 5.00  gross 5.00  lis 6.73)  dis 6.73)	2 (
8	Roggin's Bronze in	Latcheron Drop	p Latche	8Nuts	₩ dos. ₩ dos.	. 85¢ @ 40¢ n . 70¢ @ 80¢ n Plate, \$1.10:	et
4 20 10	no Plat	e, \$0.88.			ioz. \$1.	40, dis 10&10	et
N N	Surface C Flush Ch	hest				dis 60&10	2 2 2
*	Saw and Boynton'	Plane.	Saw Har	dles		dis 40&10 50¢, dis 60	N N N
A M	Brad Awl Hickory	Firmer (	Chisel, a	ssorted.	p	# gross \$2. gross \$4.50 gross 5.00	00 va
10	Apple Fir	mer Ch	isel, asso isel, larg	e		gross 5,00 gross 6,00 gross 3,00	ills 40
×	Socket Fr File, asso Auger, as	raming orted	Chisel, a	asorted.	gross gross	gross 5.00   2.75   dis 5.00   05.010	
MM	Auger, las Patent Au Patent Au	rge uger, Ive	es'		gross	7.00 ) 20010 dis 25 F set \$1.25 no	* et
et	Hange Barn Door	rs.	ran's			# set #1.00 no	20
86 88 £	Barn Door Climax (A Zenith Ar	r, New I Inti-Fric	England.	d Track		lis 60&10&10	XXX
%	Reed's Ste Challenge	eel Arm	dina Mfs	Co		dis 40 dis 50 00, dis 50&10	MMM
MM	Sterling I Double Cu Victor, No	mprove ut, Hart	d (Anti-l well's No. 2, 8	riction) 16.50; N	0. 8, \$1	dis 65&10 dis 40&10 8dis 331/5	MMM
XXX	Cheritree. Kidder's U. S		4 1	n., \$12;	in., \$1	dis 50&5dis 50&10 .5, dis 60&10dis 50&10\$1C; dis \$0\$1C; dis \$0\$18\$6 @ 50&10\$6, \$18dis 20&1dis 20&1dis 20&1	MMM
*	The "Bost Terry's Pa Cronk	itent	.No. 4, 8	in., \$12; 12; No.	316 in.	\$10; dis 40 0; No. 6, \$18	1 24.7
×	Architect. Eclipse		*********		.dis oc .₩ set	\$6.00, dis 20 dis 20&1	% 0
	El a ma El dans	VIII morrowk			41	a 50 @ 50&5	XX
XXX	Anchor (T. Henshaw' Judd's, lis	at S. Mis, list of tof 11/6	g Co.) 11/4 cha changed	nged to	\$14.00. 0	dis 65 dis 65 i.00dis 65 dis 10	76 76
X	Fitch's (Br Hotchkiss Andrews	istol), li	st of 114	changed	1 to \$14	.00dis 66 dis 10	MM
XXX	Sargent's l German, o German, S	Patent ( ld list argent'	new lie	tdin	00&10	dis 75	XXX
K K	Covert, Ne Covered S	w Pate	nt, new ew list,	lint Oct., 188	B	dis 50 dis 50 dis 50 dis 70&10&10 dis 75 dis 76&10&10 dis 75 dis 60&10 dis 35 dis 60&10 dis 60&15 dis 50&10	K K K
4	Meneely's Meneely's Hatchet	Imp. Ge	rman (O	dd Germ	an list	dis 50&10	1
6	Shingling Claw,	g, Nos. 1 Nos. 1	28	¥ dos	\$7.25 7.75	dis 35 @ 40 5 \$8.00 \$8.75 8.50 9.25 8.00 8.50 .35 @ 35&5 5	1
1	Lathing, Hunt's Shingling Claw, Lathing, Hurd's	g, Nos. 1	23	o dos	\$7.25 7.75	35 @ 35&5 5 \$8.00 \$8.75 8.50 9.25 8.25 9.00	6
1	Lathing, Hurd's	Nos. 1	23	a dos		8.25 9.00 8.40&5 @ 45 5 88.50 \$9.00	6 3
	Hurd's Shingling Claw, Lathing,	Nos. 1	28	# dos	9,00 8,00	9.50 10.00 8.50 9.00	
	Shingling Claw,	Nos. 1	23	# doz # doz # doz	\$7.50 8.25 7.50	dis 45 @ 50 1 8.00 \$8.50 8.75 9.25 8.00 8.50	1
1	Inderhill Shingling	Edge To	2 3 2 8	dos	87.95	8.00 \$8.75 8.50 9.25	1
1	Shingling Claw, Lathing, Yerkes & F Shingling Claw, Lathing, Underhill Shingling Claw, Lathing, Seattle Shingling Claw, Lathing Claw, Lathin	Nos. 1 olid Stee No. 1. \$1	2 3	dos	7.50 tern, \$1	8.25 9.00 din 30 %	100
1	Lathing, Schringling Lathing, Claw, Broad,	nd & Son , Nos. 1 Nos. 1	2 3 2 3	₩ dos	\$8.00	dis 45 @ 50 % 8.50 \$9.00 8.50 9.99	3
8		Nos. 1	23	₩ doz	11.00	9,00 9,50 13,50 16,00 dis 35 @ 40 \$	F
	Shingling Claw, Lathing,	Nos. 0 Nos. 0	123	dos #7.00	8.50 8.00	\$8.50 \$9.00 9.00 9.50 8.50 9.00 12.00 14.00 20.00 22.00	FAND
C	Broad, Broad, collins						N
1	Shingling Claw, Lathing,	Nos. 1 Nos. 1	2 8 2 8	dos	6.00 5.50	6.00 \$6.50 6.50 7.00 6.00 6.50 .dis 40&10 %	HHA
1	Shingling Lathing,	Nos. 1	28 28	₩ dos ₩ dos	88.00 8.00 9.00	8.50 \$9.00 8.50 9.00 9.50 10.00	F
	Half, Broad, Broad.	Nos. 1 Nos. 1 Nos. 4	2 8 2 8 5 6	dos	8.00 10.00 1 14.50 1	8.50 9.00 1.00 18.00 6.50 18.00	B
A	Shingling Claw, Lathing, eck's Chai Shingling Lathing, Claw, Half, Broad, Broad, x Pattern. Hay Kin Lightning lectric	Nos. 1	88	. P dos	10.00 1 # dox	1.00 12.00 \$18, dis 10 %	F
H	adsworth eath Pate	nt			# do dis # do	\$18, dis 10 % z \$12.50 net 35 @ 35&5 % oz \$13.50 net	LP
G	Hinges. ate, Weste ate, N. E.	rn			dos \$4	.40, dia 55 %	D
G	ate, N. E. ate, Clark ate, N. Y.	Reversi 's, Nos. : State	bie 1 2 8		dos 85	.40, dia 65 g .00, dia 55 g .00 dia 55 g a 60&10&2 g .00, dia 55 g .50, dia 55 g .50, dia 50 g .50, dia 50 g .50, dia 50 g .60&10&10 g dia 45&10 g 60&10&10 g dia 60&10 g dia 60&10 g .60&10 g .60&10 g .60&10 g .60&10 g	W
9000	ate, Commate, Seymo	natic ion Seni our's	le	W dos	pair 84	.50, dis 50 % .50, dis 50 % .dis 45&10 %	Н
GR	ate, Shepa eed's Latel	rd's, No	. 3 inge	# do	s sets	dis 60&10 % \$12, dis 50 %	A
R	olled Plate	ed	0 & 12 tv		******	dis 60&10 % dis 60&10 %	E
80	rew Hook	and 58,	10, 12 11	n., # m		34 334¢ 234¢	K
H	eavy Weld	led Hoo	k { 8 to 1 in.		₽ do		K
	rew Hook rought Str			Sin	# do	\$2.45 10 % \$3.80 10 %	Si Pe
	Hoes.			***		dir 60 %	Be
Mi	wrie		********				Lo
"]	foore's " I foore's " I Hollow-	iand Ho different Ware.	ist, with tial Pull	Lock B	rake	dis 15 %	St
Er	Hollow- ove Hollow ameled as Kettles	w Ware, nd Tinn	Ground ed Hollo	w-Ware	-	dis 60 %	Sta
Gr	ay Ename astless Hol	rs, Sauce led War low-Wa	epans az re	id Glue 1	Pot#	dis 60 \$dis 40 \$dis 45 \$dis 50&5 \$	Li W
Ga	nch6 Lach45	rea-Ket	7 50¢	8 85¢	9 65	,	Bo
Bi	rd Cage, Sard Cage, R	argent's coding.	list		dis	50&10&10 % dis 50 % 00, dis 50 % kn), dis 30 %	Tu
Co	tton (Hum	ason &	Beckley	Mfg. Co.	A	dis 50 %	Cu
Be	nch Hooks othes Line othes Line	, Sargen , Readin	t's list.		dis	ench Stops 86&10&10 % dis 50&10 % 10&10&10 %	Gi.
Ce Ha	rness, Res at and Ha	ent's lis iding lis t, Sarge	it. nt's list.		in 40&:	10&10&10 \$ 10&10&10 \$ 10&10&10 \$	Sq:
W	re Coat ar	d Hat,	Gem Miles'	9-11-1	Dress	10&10&10 % 10&10&10 % 10&10&10 % 10&10&10 % dis 45 % dis 70 % 14.00 %	Ta
Ta	rossssel and P	icture (	T. & S. 1	ffg. Co.).	a. die	dis 25 %	Bla
W	ought Sta	ples, Sta Hooks a	aniey's i	ist w Eyes	.dis 75	dis 25 \$dis 50 \$dis 50 \$dis 50 \$dis 60 \$dis 80 \$dis 80 \$	U. Na
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I A	Iorse No	Nos. 5	6 7	8 9	10	dis 254:10 <	Ma
CH	nton, Pi'n. nton, Fin.	# B	23¢ 21¢ 24¢ 22¢ 28¢ 264	20¢ 19¢ 21¢ 20¢ 25¢ 24¢	18¢ 19¢ 23¢.dia	dis 25&10 % dis 25&10 % 25&10&5 %	Pr Oli Oli
Pu Vu No	tnam lean rthwest'n	P n 26	284 284 284 214 284 234	21¢ 20¢ 20¢ 19¢ 22¢ 21¢	19¢ 18¢ 20¢di	dis 5&7 %   dis 15 %   s 10&5&5 %	Bri
Glo C.	D. BK	# h 26 # h 28	23¢ 21¢ ¢ 25¢ 23¢ ¢ 26¢ 28¢	20¢ 19¢ 22¢ 21¢ 23¢ 21¢	18¢di 20¢ dis 80¢	10&10&5&5 % 10&10&5 % in 10&10 %	Ro
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1611	rden				E KOK S	8.75 @ 3.85	*

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35 50 20	#   30 kpg #3 75 @ 3 85
85	N. V. Belting & Packing Co., Standarddis 60 %
10 10 10	<ul> <li>Ce Awls, Chisels, &amp;c.</li> <li>American Ice Chisel Pol'd &amp; doz \$3.00, dis 20 %</li> <li>National Ice Chisel</li></ul>
ne 10	t Noveity Ice Breakers. # doz #0.25, dis 20 / 25 White's Sliding Head Picks. # doz #2.50, dis 40 / 25 Dunlap's Ring Picks. # doz #2.00, dis 25 / 3
$\frac{10}{10}$	Word Read Picks, Sargent's # doz \$1.50, dis 505.10 % Iron Head Picks, Sargent's # doz \$1.25, dis 506.10 % Ice Mallets, Pick in handle # doz \$2.00, dis 15 f
10 ne	Combination Ice Tools
ne ne ne	American, Crown and Star
10 70 10	Champion, S. S. & Co doz estor dis
70 10 10	Kettles. Brass, 7 to 17 inches inclusive # b 28¢, dis 15 % Brass larger than 17 inches # b 32¢, dis 15 %
80 20 2.0	Enameled and Tea KettlesSee Hollow-Ware Knivesdis 25 %
40.6	Nichols' Butcher Knives
dia	Hay and Straw
0 %	Carriage, Japanned
nei nei	
0 %	Door Por. Plated. Dut net prices sometimes made Door Por. Structure Plain. 75¢ gross 'nen, dis 10 %
5 %	Picture, Judd's dis 60&10&10 Picture, Sargent's dis 60&10 & 50
0 %	Shutter, Porcelain. dis 60&10 %
0 % % % %	Melting, Sargent's   dis 50&10 5   Melting, Reading   dis 30&210 5   Melting, Reading   dis 30&210 5   Melting, Monro's Patent   P doz, \$4.00, dis 30&210 5   Melting, P, S, & W   dis 30&210 5
0%	Lanterns. Tubular, Standard No. 0, \$\pi\$ dos
0%	Lanterns.   Tubular, Standard No. 0, \$\Pi\$ dos.   \$6.75 @ \$7.00     Tubular, Standard No. 1, \$\Pi\$ dos.   8.50 @ 9.00     Tubular, Lift Wire, No. 0, \$\Pi\$ dos.   8.25 @ 8.75     Tubular, Lift Wire, No. 1, \$\Pi\$ dos.   10.50     Guards for Tubulars. add \$\Pi\$ dos.   2.5     Folice, Small, \$\Pi\$ dos.   2.5     Large, \$9.75     Large, \$9.75     Large, \$9.75     Owl.   \$\Pi\$ dis \$20.85     Owl.   \$\Pi\$ dis \$20.85     Owl.   \$\Pi\$ dis \$20.85     \$\P
0 % 210 0 %	Police, Small, \$6.00; Medium, \$7.25; Large, \$9.75 dis 10@15 \$ Porter's Tin R. R. \$10 dis 20 \$
5 %	Porter's Tin R. R.
5%%%%	Wood.
0%	Sammls'No. 1, \$5; 2, \$9; 12, \$18 \$\pi\$ doz., dis 20&10 \$\frac{1}{2}\$ Townsend's Patent\$6.00 \$\pi\$ doz., dis 33\frac{1}{2}\$ Jennings' "Star"\$3.00 \$\pi\$ doz. net
5%	The "Hoss"
5%	Lines.
0 %	Cotton Chalk  Silver Lake, Braided, Nos. 0, \$0.00; No. 1, \$0.50; No. 2, \$7.00; No. 3, \$7.50 \times gross
5	Masons' Linen, No. 314, \$1.50; No. 4, \$2; No. 434, \$2.50. Net Masons' Colored Cotton. dis 45 %
*	Wire Clothes, Galvanizedeach, 25¢@40¢ net Locks, Padlocks, Cabinet Locks, &c. Door Locks, new list, Dec. 10. '84
1 %	Reading Hardware Co. (rev. list Jan. 2, '84). dis 60&10 % Plate. dis 33%&2 % F. Many's "Extension Cylinder". \$10.50 % dog net
9	Barnes Mfg. Co.   dis 40 %   Yale Flat Key   dis 40 %   Dietz Flat Key   dis 30 %   di
	Stoddarddis 30 % Langstroth & Crane's:
*	Flat Key Latches dis 331/4210 % Cabinet, Eagle bond some numbers March 10.
*	Cabinet, P. & F. Corbin. ) 1884, dis 45&2 % cash. Cabinet, A. E. Deits
%	A. E. Deltz, Flat Key Drawer
%	"Felfer" or "American" dis 40&10   Eagle Trunk dis 25&2   PADLOCES.
	Door Locks. new list, Dec. 10, 784
%	Wm. Wilcox & Co
	Eagle       dis 25&2 %         Romer's, Nos. 0 to 91       dis 40 %         Romer's, Nos. 200 to 505       dis 25 %
*	A. E. Diets
	Fraim's Fat. Scandinavian, new list
	Brown's Patent dis 25 % Scandinavian dis 80 % Lustre.
X t X t	Hickory dis 10&10&5 %
8	Lignum   L
LA M	# dos. \$14.00 17.00 19.00 30.00—dis 40 5
N W W	Woodruff's (P. S. & W.)Nos. 100 180 # doz. #15.00 18.00—dis 45 % Hales'Nos. 11 12 18
200	♥ dos\$27.00 33.00 50.00—dis 60&10&2@70 1 Draw CutNos. 5 2 6 8 10 Each\$50.00 75.00 80.00 225.00 400.00—dis 20 ≤
1	American
	Enterprise
0 0	Kleser's No. 55. 440 % dos, dis 40 % Kleser's Gem. 525 % doz, dis 40 % Kleser's Monarch 445 % dos, dis 40 %
6	Kleser's Butcher.       \$40 each, dis 20 g         Silver & Deming.       dis 25 g         Pennsylvania.       dis 40&10 g
6	Nos
	Am. (2d quality), # gro, 1 blade, \$7; 2 blades, \$12; 3 blades, \$18.
	Smith's, \$\ dos, Single, \$2.00; Double, \$3
	Molasses Gattes. dis 80 % Steebins Genuine. dis 76 %
	Chase's Hard Metal   dis 50&10 %
	308 Nos. 1 2 3 4
1	Valls. See Trade Repo
1	Nati Puller. # dos \$0.00 net
1	Nails
i	duare Nuts
1	Nut Crackers.  able (Humason & Beckley Mfg. Co.). dis 33% s lake's Pattern. dis 200, dis 5 g  curner & Seymour Mfg. Co. dis 50 g
100	J. S. Navy
	Ollera.
1 3	Malleable (Hammer's), No 1, \$3.25; No. 2, \$3.00; No. 3, \$4.00 P dos. No 4 rior's Patent or "Paragon" Zinc dis 60&5 (a 60&10)
1	Prior's Patent or "Paragon" Brass
MM	dia c and Tin
1	Dacking, Steam.         Steam.         dis 50&10 %           Peack         Peach
1	lotary Knife.
September 1	Pencils.         aber's Carpenters'         bigh list, dis 50 %           aber's Round Gilt.         ₱ gro \$5.25 net           4kxon's Ledd.         ₱ gro \$4.50 net           4kxon's Lamber.         ₱ gro \$0.75 net           4kxon's Lamber.         ₱ dot 40 to 10 %
Î	vixon's Carpenters'dis 40&10 \$

P. S. P. P. Distant Stant Control of the control of

White C
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Peace Band Saws, all widths
Hart's Patent Lever
# Hatch, Tea. No. 101. # dos \$15.00, dis 50% Union Platform
# Hatch, Tea. No. 101. # dos \$15.00, dis 50% Union Platform
Chatillon's Eureks. dis 2 Chatillon's Family Favorite. dis 3 Family Universal # doz, 12 m, \$30.00; 24 m, \$36.00, 1 Family, Turnbull's. dis 3 Scale Beams, List of January 12, 1882. dis 60 on 60&
Chatillon's Eureks. dis 2 Chatillon's Family Favorite. dis 3 Family Universal # doz, 12 m, \$30.00; 24 m, \$36.00, 1 Family, Turnbull's. dis 3 Scale Beams, List of January 12, 1882. dis 60 on 60&
Adjusted   Amily   Turnbull's   dis 3   Scale Beams, List of January 12, 1882   dis 60   60 & 8   Scale Beams, Custer   dis 2   Scrapers   Scrapers   Adjustable Box Scraper   S. R. & L. Co.) \$6.50, dis 20&1
Scrapers. Adjustable Box Scraper (S. R. & L. Co.), \$6.50, dis 20&1
ar dog 84 00 dig 1
Box, 2 Handle
Ship, Common
Porter's Pat. Window and Door Framedis 333 Screw Drivers.
O Disston's
Stanley R. & L. Co.'s Varnished Handlesdis 60&1 Stanley R. & L. Co.'s Black Handlesdis 50&1 Sarcent & Co.'s Nos. 1 & 20 Forged Blade.
Sargent & Co.'s Nos. 20 & 30, Cast Steel.dis 55&10&10
Knapp & Cowles' No. 1 Extra. dis 60&10&10 Knapp & Cowles' No. 1 Extra. dis 50&10
Sets interchangeable \$\Psi\$ dos \$18.00, dis 2\$ Champion dis 2 Clark a Patent
Ship. Common.
Am. Screw Co.'s list, Jan. 1, 1885 : Flat Head Irondis 8
Flat Head Brass dis 75&10 Round Head Brass dis 75&10 Round Head Brass dis 75&10
Appained, list of Plain Screws
Flat Head Brass. dis 831 Round Head Brass. dis 833
Fiat Head Iron. dis 384 Round Head Iron dis 28
Round Head Brass dis 30 Brass and Silver Capped Screws dis 383
Lag Or Couch. dis 70c.11 Coson, Patent Gimiet Point. dis 72 Bed. dis 334
Machine, Flat Head, Iron. dis 66 Machine, Round Head, Iron. dis 55 Bench, Iron. dis 55&10
Bench, Wood, Beech   \$\psi\$ doz \$3.00, dis 1
Hand Rail, Sargent's
Scroll Saws.—Lester, \$10.00
Shears and Scissors.  American (Cast) Iren
Barnard's Lamp Trimmers   \$\pi\$ dos \$3.7   Tinners'   add 6 \( \pi\$ dis 10   Seymour's, List, Dec., 1881   dis 00&10
Heinsch's, List, Dec., 1881.       dis 60&10         Heinsch's Tailor's Shears.       dis 83½         Mass. Cutlery Co. St. Trimmers.       dis 80
Cast Steel Trimmers
Victor Cast Shears
Clark's Patent
Silding Door, Patent Roller
Sliding Shutter, Sargent's list
Moore's Anti-Friction (Hanging)
Ames' Shovels, Spades, &c., Ames' brandsdis 20 Some special brands of Ames' goodsdis 20&10
Old Colony
Lehigh Mfg. Co. dis 50at 10 Payne Pettebone & Sou, list Jan. 2, 1882. dis 50at 5 R T. Pettebone Dat Shovals are list
R. T. Pettebone, Pat. Scoops, new list. dis 20 Remington's (Lowman's Patent). dis 30 Rowland's Risck Iron
Rowland's Steel. dis 00 @ 60&5 Shovels and Tongs. dis 00 @ 60&5 Iron and Brass Head, R. & E. list
Iron and Brass Head, P. S. & W. dis 50&5&10 Polished Steel, new list. dis 50&10&2 Sieves.
Sieves. Buffalo Metallic, S. S. & Codis 50&25; Slutes. Square Frames, by case
Spoke Shaves.
Halloy's (Stanley R. & L. Co.). dis 40&10 Stearns'. dis 30&10
Bonney's
Douglass'   # dos #0.00, dis 20   Spoons
Britannia dis 60&10 Meriden Brit. Co., Rogers dis 50&5 Wm. Rogers Mfg. Co.
Holmes, Booth & Haydens dis 50&10 Holmes & Edwards Silver Co dis 50&1065 German Silver dis 50&1065
Sieves   Sieves   Sistem   Sieves   Sistem   Sieves   Sistem   Signare Frames   Signare   Signare Frames
Tin (P. 8. & W.), Tens. \$1.25 \( \tilde{\text{w}} \) gro ne Tin (P. 8. & W.), Tables \$2.00 \( \tilde{\text{g}} \) gro ne
Tin (Cowies Hdw, Co.), case lots. dis 20 : Squares. dis 20 :
Tin (Cowles Hdw. Oo.). case lots. dis 20 : Squares. dis Steel and Iron. dis Steel and Iron. dis October Steel and
Winterbottom's Try and Miter
Lightning "Serew Plate dis 10 s \$10 s.  \$10 ne. dis 10 s.  Hindostan No. 1, 0¢; Ax, 8¢; Slips, 10¢ dis 40 s.  Sand Stone
Washita Stone, Extra , p, dis 3398110 g Washita Stone , No. 1, p h, 160 g Washita Stone , No. 1, p h, 140
Washita Stone Slips
Turkey Oil Stone (Chase)4 to 8 in., \$\psi\$ b, 60\$\psi\$ dis 10 \$\frac{10}{2}\$ Turkey Silps (Chase)
Lake Superior Slips (Chase)
Buffalo Zinc, S. S. & Co
Gem 9 gro 84.50, dis 10 % Gold Medal 9 gro 86.00, dis 25 % "Mirror" 9 gro 86.00 dis 25 %
Lustro
Dixon's Plumbago. # 85 net Boynton's Noon Day, # gro, No. 1, large, \$5.50; No. 2
Nacks, Brads, &c. New List, Sept. 1, 1882
rinned swedes Tacks
American Cut Tacks
Lake Superior (Chase).
Inishing Nails
lasket Nafis
Igar Box Nails.
NA MAN ANNAN CHANGE BEFFER AN DEPARTMENT OF THE PARTMENT OF TH

Tap Borers.  Common and Ring	dis 20&10 %	Parallel, Prentiss Parallel, Simpson's A	djustable
Common and Ring Ives' Tap Borers. Nos. 1s Ives' Tap Borers. Nos. 1s Enterprise Mfg. Co. Clark's.  Tapes, Measuring.	dis 25&10 % , 14—dis 25&10 %dis 20&10 %dis 20&10 %	Saw Filers, Stearn's. Saw Filers Hopkins' Saw Filers, Reading. Saw Filers, Wentwor	djustable
American. Spring	dis 25&10 % dis 40 % ular list dis 25 %	Richardson's Vise and Washer Cutters Smith's Patent.	d Anvil \( \psi \) doz \( \frac{1}{2}.00 \), dis 20
Thermometers. Tin Case.  Tinners' Shears, &c. Shears and Snips (P. S. & W.). Punches—See Punches.	dis 80 %	Penny's	¥ doz \$12.00, dis 20 —
Punches—See Punches.  Tinware. Stamped, S. & Co. Pieced, S. & Co. Japanned, S. & Co.  Transom Lifeers	Net prices	****	in., \$1.85; 10 in., \$2.15;
		Brass and Copper, ne Market, Bright and Ar Market, Coppered Market, Galvanized	w list, Jan. 18. 1884 nnealed, Nos. 0 to 18
Wollensak's Patent. Reiher, Imp. Lifter, list, Oct., 1883  Tobacco Cutters. Enterprise Mg. Co. (Champion)	dis 50&10&2 \$	Market, Tinned, Tinn Stone, Bright and Ann Stone, Bright and Ann Stone, Galvanized, No.	w list, Jan. 18. 1884 nnealed, Nos. 0 to 18 ed list
Robucco Catters. Enterprise Mfg. Co. (Champion)	0.00, dis 30&10 % F doz \$4.50 net 8.00 dis 50@55 % 	Stone, Tinned, Tinned Tinned Broom Wire. Cast Steel Wire Annealed Fence, Nos.	8 & 9
Acme	1 \$20.00, dis 40 %	Fence Staples. Fence Staples, Galvar Stubs' Steel Wire. Barb Fence.	10 to 14
Game, Blake's Patent.  Mouse, Wood, Choker.  Mouse, Round Wire.  Mouse Cage, Wire.	dis 40&10 %dis 40&10 %  # doz holes, 15¢ oz \$1.50, dis 10 % oz \$2.50, dis 10 %	Wire on Spools Steel Music Wire, Nos Picture Wire. Clothes Line Wire, G	, 7 to 30. alvanized ♥ coil 25¢ o ab and black, ♥ 100 sq. . \$2.00 net
Treps. Game, Newhouse Game, Oneida Pattern Game, Blake's Patent. Mouse, Wood, Choker Mouse, Round Wire. \$\psi\$ d Mouse Cage, Wire. \$\psi\$ d Mouse Cach-'em-alive. \$\psi\$ d Mouse Cach-'em-alive. \$\psi\$ d Mouse Cach-'em-alive. \$\psi\$ d Trow-is	DE \$2.50, dis 15 % P gross \$10 net 8 \$18.00, dis 20 % E \$10.00, dis 10 %	Wrenches.—Ame Baxter's Adjustable	rican Adjustable
Rat. 'Decoy' # do Trow-is Lothrops' Brick and Plastering. Reed's Brick and Plastering Disston's Brick and Plastering. Peace's Plastering. Plement & Maynard's. Kose's Brick. Brade's Brick Worrall's Brick and Plastering a	dia 20&10 \$dis 15 \$dis 20&10 \$dis 20&10 \$	Coes' Genuine Coes' "Mechanics'" Coes' Pattern, Malleal Coes' Pattern, Wroug	
Clement & Maynard's. Rose's Brick Brade's Brick Worrall's Brick and Plastering.	dis 20 % dis 15 % dis 25 % dis 25 % dis 20 %	Girard Standard Girard Agricultural Bemis & Call's Patent Bemis & Call's Merric	Combinationdi
Trucks, Warehouse, &c.	dis 25 %	Bemis & Call's Cylind Aiken's Pocket (Brigh The Favorite Pocket ( Webster's Patent Con	er or Gas Pipe
Twine. No. 12, Flax Twine, 4 and 4 B Balls	BC. B. 18¢ 20¢ 17¢ 18¢	Boardman's "Always Ready" Alligator Donohue's Engineer	dis 25c
No. 264, Mattrass, 4 and 4 and 5 Chalk Line, Cotton, 6 Balls.	.17¢ 18¢	Wringers. Noveity, for Common Novelty, for Common Excelsion, for Stations	Tubs, No. 2, 10 inch Tubs, No. 3, 11 inch ary Tubs, No. E, 10 inch
Fenneld Block Co.'s list, 1882.  Twine, No. 12, Flax Twine, \( \) and \( \) Balls. No. 36, \( \) \( \) and \( \) \( \) Malls. No. 36, \( \) \( \) and \( \) \( \) \( \) Malls. No. 36, \( \) \( \) \( \) and \( \) \( \) \( \) Malls. No. 264, Mattrass, \( \) and \( \) \( \) Malls.  halk Line, Cotton, \( \) and \( \) Balls.  Ply Hemp, \( \) and \( \) Balls.  Ply 1		Excelsior, for Stations Excelsior, with Foldin Excelsior, with Foldin Universal, No. 214	ary Tubs, No. F, 11-inch ig Bench, No. A, 10-inch g Bench, No. B, 11-inch
Cotton Mops—6, 9, 12 and 15 b to dos  Vises.  Solid Box	is 50 @ 50&10 x	Universal, No. 14 Universal, No. 14 Universal, No. 1 Universal, for Set Tub	Per Tubs, No. 2, 10-inch Tubs, No. 3, 11-inch ry Tubs, No. E, 10-inch ray Tubs, No. F, 11-inch ray Tubs, No. F, 11-inch g Bench, No. A, 10-inch g Bench, No. B, 11-inch s Bench, No. B, 11-inch s Bench, No. B, 11-inch
Parallel, Howard's		Universal, for Set Tub Adams & Co. No. 8 Peerless No. 236 Peerless No. 336	я, E 199я, C 1
Paraliel, Merriti's. Paraliel, Sargent's. Paraliel, Backus and Union. Paraliel, Double Screw Log.	dis 15@20 %	"Metropolitan," No. 2 "Metropolitan," No. 2	. Hooks, &cc.—See H
THE JENNINGS &	GRIFFI		CTURING CO
L'Homme	dieu	Auger	Works
The Oldest Auger Works in Ameri	ca.	Established by Josh	ua L'Hommedieu In
The Oldest Auger Works in Ameri	STEPSEED IN	SECRETARIA A CO	
The Oldest Auger Works in Ameri			
The Oldest Auger Works in Ameri	MANUFACTU A SHUP A UC		V
"L'Hommedieu"	SHIP AUG SHIP AUG SINGLE TO	ERS and SHIP AUGIER PATTERN CAR I	INE AUGERS.
L'Hommedieu  E. H. TRACY'S TRENAI  These Augers and Bits are designed hat they bear the stamp of "L'He harks. Goods bearing these brands a urmed shank, Ship Auger Partern	SHIP AUG SHIP AUG SINGLE TO LAND SCOTCE especially for to mmedien " or re fally warra furhished pron	ERS and SHIP AUGIER PATTERN CAR I WIST BORING MACE I PATTERN AUGERS boring hard wood. In "Watroms & Co.," unted. Special sizes uptly to order.	HTS. UNE AUGERS. ordering Ship Augers as these are our only of Machine Augers ar
"L'Hommedieu"	SHIP AUG SHIP AUG SINGLE TO LAND SCOTCE especially for to mmedien " or re fally warra furhished pron	ERS and SHIP AUGIER PATTERN CAR I WIST BORING MACE I PATTERN AUGERS boring hard wood. In "Watroms & Co.," unted. Special sizes uptly to order.	HTS. UNE AUGERS. ordering Ship Augers as these are our only of Machine Augers ar
L'Hommedieu  E. H. TRACY'S TRENAI  These Augers and Bits are designed hat they bear the stamp of "L'He harks. Goods bearing these brands a urmed shank, Ship Auger Partern	SHIP AUG SHIP AUG SINGLE TO LAND SCOTCE especially for to mmedien " or re fally warra furhished pron	ERS and SHIP AUGIER PATTERN CAR I WIST BORING MACE I PATTERN AUGERS boring hard wood. In "Watroms & Co.," unted. Special sizes uptly to order.	HTS. UNE AUGERS. ordering Ship Augers as these are our only of Machine Augers ar
L'Hommedieu  E. H. TRACY'S TRENAI  These Augers and filts are designed they bear the stemp of "L'He airned Shanks, Ship Auger Parters	SHIP AUG SHIP AUG SINGLE TO LAND SCOTCE especially for to mmedien " or re fally warra furhished pron	ERS and SHIP AUGIER PATTERN CAR IN WIST BORING MACE PATTERN AUGERS SOUTHER HATTERN AUGERS OF THE WARTON & Co.," unted. Special sizes aptly to order.	INE AUGERS.  ordering Ship Augers as these are our only of Machine Augers at Street, NEW YOU
L'Hommedieu  E. H. TRACY'S TRENAI  These Augers and Bits are designed that they bear the stamp of "L'He barks. Goods bearing these brands a	SHIP AUG SHIP AUG SINGLE TO LAND SCOTCE especially for to mmedien " or re fally warra furhished pron	ERS and SHIP AUGIER PATTERN CAR IN WIST BORING MACE PATTERN AUGERS SOUTHER HATTERN AUGERS OF THE WARTON & Co.," unted. Special sizes aptly to order.	une Augers.  ordering Ship Augers as these are our only of Machine Augers as Street, NEW YO
L'Hommedieu  E. H. TRACY'S TRENAI  These Augers and Bits are designed hat they bear the stamp of "L'He arks. Goods bearing these brands a urned Shank, Ship Auger Pastern C. E. JENNINGS	SHIP AUG SHIP AUG SHIP AUG SHIP AUG SHIP AUG SHIP AUG TO THE SHIP AUG SHIP	ERS and SHIP AUGIER PATTERN CAR IN WIST BORING MACE I PATTERN AUGERS boring hard wood. In "Watrous & Co." and od. Special sizes aprily to order.  96 Chambers S	une Augers.  ordering Ship Augers as these are our only of Machine Augers as Street, NEW YOU
L'Hommedieu  E. H. TRACT'S TRENAI  These Augors and Bits are designed hat they bear the stamp of "L'He arred Shank, Ship Auger Pastera  C. E. JENNINGS	SHIP AUG SHIP AUG SHIP AUG SHIP AUG SHIP AUG SHIP AUG TO THE SHIP AUG SHIP	ERS and SHIP AUGIER PATTERN CAR IN WIST BORING MACE PATTERN AUGERS SOUTHER HATTERN AUGERS OF THE WARTON & Co.," unted. Special sizes aptly to order.	INE AUGERS.  ordering Ship Augers as those are our on of Machine Augers as street, NEW YO

		-
	Parallel, Prentiss.   dis 25&	5 9
1 %	Parallel, Simpson's Adjustabledis 4	0 %
1 %	Saw Filers, Bonney's. Nos. 2 & 3 P doz \$15.00, dis 4	0 %
1 %	Saw Filers, Stearn'sdis 20&1	0 %
7 %	Saw Filers Hopkins' F doz \$17.50, dis 1	0 %
1%	Saw Filers, Readingdis 40&1	0 3
	Cowell Hand Vises die 9	0.4
	Richardson's Vise and Anvil dis 2	5 %
2		-
×	Washer Cutters.  Smith's Patent	~ "
14	▼▼ Smith's Patent ♥ dos \$12.00, dis 20&10&1	0 %
	Ponnyla 20 des Pol 214 Tanid 210 des	23
18	Appleton's 2 dog \$18.00 dis 60.01	0 8
-	Bonney's dis 30&1	0 4
1%	*** *	- /
,-	Washers.—See Nuts and Washers.	
	Well Wheels-8 in., \$1.85; 10 in., \$2.15; 12 in.,	93
68		der.
1%	Wire.	
76	Brass and Copper, new list, Jan. 18, 1884dis 3 Market, Bright and Annealed, Nos. 0 to 18dis 70& Market, Coppered Annealed, Nos. 0 to 18dis 70&	0 %
	Market, Bright and Annealed, Nos. 0 to 18dis 70&	5 9
8		
MXW	Market, Galvanized         dis 60%           Market, Tinned, Tinned list         dis 60%           Stone, Bright and Annealed Nos. 19 to 38         dis 70%           Stone, Bright and Annealed Nos. 27 to 36         dis 70%           Stone, Galvanized, Nos. 19 to 30         dis 75%           Stone, Galvanized, Nos. 19 to 30         dis 50%           Stone, Tinned, Tinned list         dis 60%           Cast Steel Wire         dis 55%           Cast Steel Wire         dis 55%	5 %
8	Market, Tinned, Tinned listdis 60%	0 %
	Stone, Bright and Annealed Nos. 19 to 26dis 70&	0 %
	Stone, Bright and Annealed Nos. 27 to 30,dis 75&	5 %
70	Stone, Galvanized, Nos. 19 to 30	0 %
78	Timped Process Wire	5 8
et d	Cast Stool Wise	O 78
2	Annealed Fence Nee 8 & 0 dis 20&	5 4
2	Stole   Tinned   Ti	5 4
2	Fonce Stanles 20 %	5 0
1	Fence Staples Galvanized 2 %	8 6
	Stubs' Steel Wire #6 00 to £ dis 3	0 %
%	Barb Fence See Trade Repo	ort
8	Wire on Spoolsdis 6	5 %
76	Annealed Grape, Nos. 10 to 14. dis 70 ce Fence Staples.	10
50	Picture Wiredis 5	5 %
××	Clothes Line Wire, Galvanized P coil 25¢ @ 40¢ I	et
2	Steel music wire, Nos. 7 to 30	
at:	#2.00 net @ dis	3 %
5	WrenchesAmerican Adjustabledis 4	5 %
%	Baxter's Adjustable "S" dis 331	6 %
,	Baxter's Diagonal	3 %
4	Coes' Genuinecash in 10 days, dis 60&:	3 %
2	Coes' "Mechanics'"dis 60&10&	3 %
21	Coes' Pattern, Malleabledis 75&1	5 %
8	Coes Pattern, Wroughtdis 75&5 @ 75&1	2.76
8	Girand Agricultural dis 7	70
%	Bornia & Collie Datont Combination dis 2	20
8	Romis & Call's Marrick's Pattorn dis 3/	100
21	Bemis & Call's Rrigg's Pattern dis 2!	8
20	Bemis & Call's Cylinder or Gas Pipe	18
- 1	Aiken's Pocket (Bright)	1%
8	The Favorite Pocket (Bright) # doz \$4.00, dis 46	1%
	Webster's Patent Combinationdis 25	1 %
%	Boardman'sdis 25@25&10	1%
	"Always Ready"dis 25&2	1%
	Alligatordis 40&10	18
	Dononue's Engineerdis 20	76
.	Wrenches.—American Adjustable dis 48 Baxter's Adjustable "S" dis 308 Baxter's Algonal cash in 10 days, dis 908 Coes "Genuine. Cash in 10 days, dis 908 Coes "Mechanics" dis 908 Coes "Attern, Mrought dis 708 Coes Pattern, Mrought dis 708 Coes Pattern, Wrought dis 708 Coes Pattern, Wallender, dis 708 Coes Pattern, Wallender, dis 708 Coes Pattern, dis 708 Co	
0	Noveity, for Common Tubs, No. 2, 10-inch \$30.00 )	
0	Novelty, for Common Tubs, No. 3, 11-inch 84.50	
0	Excelsior, for Stationary Tubs, No. E, 10-inch 39.00	
0	Excelsior, for Stationary Tubs, No. F, 11-inch 43.50	
6	Excelsior, with Folding Bench, No. A, 10-inch 48.00	
21	Excelsior, with Folding Bench, No. B, 11-inch 52.50	
2	Universal, No. 214 30.00	nã.
21	Universal, No. 2 33.00	2
9	Universal, No. 15 34.50	~
	Universal No. 14	Page .
8	Universal for Set Tube 4 01/	22
8	Universal for Set Tube, A 256	un
%	Universal, for Set Tubs, C.1. 68 00	D
%	Adams & Co. No. 8	
%	Peerless No. 236. 30.00	
8	Peerless No. 332	
2	Wringers. Novelty, for Common Tubs, No. 2, 10-inch	
2	No. 99 Improved 214	
200	"Metropolitan," No. 2. 33.00 "Metropolitan," No. 24. 30.00	
2	Wrought Staples, Hooks, &c See Hooks.	
. 1	Trought Paupien, tiooks, &c See Hooks.	
-		-
E0.3	IN MANUFACTURING CO.,	

MANUFACTURING CO., Auger Works, Established by Joshua L'Hommedieu in 1818.



TURERS OF



MAMMOTH FOUNDRY · MAIN BUILDING · COVERS OVER 3: ACRES BUFFALD, NY.



# IMPORTANT!!

525

PHILADELPHIA H

90

BEEKMAN

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NEW

YORK.

H

GILBERTSON'S 010 WETHOD ROOFING.

OOFING CAMARET " PLATES. ROOFING.

S. H. & E. Y. MOORE,

163 & 165 Lake St., Chicago,

# HEAVY HARDWARE

# Railroad Supplies

CLIMAX" BARN DOOR HANGERS, "ZENITH" BARN DOOR HANGERS, For Wood Track,

MOORE'S FREIGHT CAR DOOR HANGERS BAGGAGE CAR DOOR HANGERS, RAILROAD HANGERS, PARLOR DOOR HANGERS

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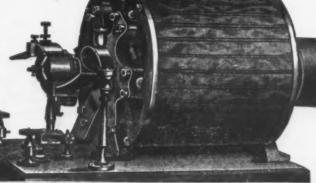
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THE AMERICAN DYNAMO ELECTRO-PLATING MACHINE.

Best Plating Machine in the Market.

HEADQUARTERS FOR EVERYTHING IN THE PLATING AND POLISHING LINE.



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Zucker & Levett Chemical Co., 538 to 564 W. 16th St. 36 to 40 11th Ave. NEW YORK, U. S. A.

# WHOLESALE METAL PRICES, January 21, 1885.

### METALS.

#RONDury: Bars, 8-10¢ to 11-10¢ % %; pro-
vided that no Bar Iron shall pay a less rate of duty
than 35 %. Sheet, 11-0¢ to 15-10¢ % b. Band, Hoop
and Scroll, 1¢ to 1 4-10¢ & D. Railroad Bars weigh-
ing more than 25 b @ yard, 7-10¢ of 1¢ @ b.
Standard American Pig Iron.

Foundry No. 2 X Gray Forge								. 99	ton	17,00	0	18 00 17.00	
No. 1	N	64	01	e	h	1	F	dg	Er	on.			
Carnbroe								. 18	ton			20.50	
Coltness	. ,							. 198	ton			21.50	
Shotts								. 98	ton			22,00	
Glengarnock								90	ton	19,50		20.50	
Gartsharrie								- 1	ton			22.00	
Langloan	. 1		v		0.7		• •	· E.	ton			22.00	
Summerlee								. 2	ton	30.50			
Dalmellington								. 2	ton		8	19,50	
Eglinton								- 55	ton			19.50	

Clyde	9	10.0
Rails.		
Steel, at Eastern mills 9 ton Old Rails, Ts 9 ton 16.00		
Scrap.		
Wrought, ♥ ton, from yard17.50	@	18,

Bar Iron from St	ore		
Common Iron: %4 to 1 in, ro und and square) 1 to 6 in.x% to 1 in	190	<b>B</b> 1.	7 @ 1.9#
Refined Iron: % to 2 in. round and square 1 to 6 in. x % to 1 in	a m	1.9	@ 2.2#
1 to 6 in.x1/4 and 5-16	a m	2.3	@ 2.40¢ @ 2.50¢
"Burden's Best" Iron, base price. Burden's "H. B. & S." Iron, base p Norway Nail Rods	orio	9,	10 2.6¢

SI	heet	Iron	from	Store	
			Com	mon	R. G.
				erican.	
		-			
Nos. 10 to 16				@ 8 6	3940
17 to 90			1b 8	@	394¢
21 to 94		102	ID S	@	33/40
95 and	040	100	D 3.25	@	4 6
GO BRAIN		39	th 9 9714	· @	4 0
26		100	th 9.50	6	43.60
28			10 0.00	12 13	ald one
				В В.	
Galvanized,	10 to 2	30	W	D 5366	5 6
Galvanized,	21 to 9	M	18 1	D 0 C	5164
Galvanized,	95 to 9	NS	10 1	b 616e	6 €
Galvanized,	97		39.1	b 7 6	6166
Gaivanized,	100		90.9	21/0	7 0
Galvanized,	28		90.5	10124	D 0 4
American R	ussia.			D TOVER	D, 10 W
Russia			W B	10940 @	8 1194¢
American Co	old Ro	lled B.	B P 1	5 00	B 7 0
CRAME OF PURSON OF					

### American Cast Steel For American Steel, see Pittsburgh quotations

### English Steel.

Bent Cast W 10 10599
Extra Cast 1614 @ 17140
Circular Saw Plates In 1416
Round Machinery, Cast 10196
Swaged, Cast 10 lb 151/40
Rout Double Shear W ID 15160
Blister, 1st quality
Blister, 1st quality
ad quality
8d quality W ID 8 @
Sheet Cast Steel, 1st quality If ID 1536¢
2d quality
8d quality 12124
TIN DUTY Plates, Sheets, Tagger and Terne,
16 10 th : Bars, Block and Pigs free.
Ranca
Straits ID 1750F US 1050F
English # 10 18 @ @ 19 @
Bar

### Charcoal Tin Plates.

I C 10x14   225 she	ets	box	\$5.95	0	\$6,00
I C 90x28, 1		6.6	11.00	4	12.50
I X 10x14 ( 225 4		4.6	6,50	0	7.25
1 X 14x20, 119		66	6.50	9	7.25
D C 1234x17 100 " X 1234x17, 100 "		0.6	5,00	0	5.50
each addition	al X add	6.6		6	1.50

### Coke Tin Plates.

	Best.	Ordinary.
I C 10x14 }	\$5.00	\$4.75 @ 4.87%
I C 12x12 I C 10x20, gutters, 225 shee	5.1234	4.75 @ 5,00
I C 10x20, gutters, 225 sheet I C 20x28, 112 sheets	ets. 8.00	7,25
To answer the second		

### Terne Plates. Prime Char. 2d. quality

1 C 14x20 Tregoning, Old Pr			
I C 20x28 I C 14x30\$4.75 @ 4.8716			4.50
1 X 14x20 6.60 @ 6.123 1 C 20x28 9 75 @ 10.00	9,50	9.00 @	9.873
I X 20x9812,50 @ I C 20x20013,50 @			
Tin Boiler	Plates.		

### EVY 14-96 9 sheets for No. 7, 112 sheets . @ \$15

IXX 14X20, 2 sheets for No. 1, 114	- man	CULB.	- 10	2. 10.11	3.00
IXX 14x28, 2 " No. 8,			. @	1	4.50
IXX 14x28, 2 " No. 8, IXX 14x31, 2 " No. 9,			. @	1	5,00
COPPER. DUTY: Pig. Bar	and	Ingo	ot, 4	4:1	Old
Copper, 8¢ w . Manufactu	red	(inc	ludi	ng	all
articles of which Copper is a co	omi	one	Di O	f el	nef
value). 35 % ad valorem.	10 m				
Ingot, Lake	de no	1134	P 6	0 11	749
Ingot, Baltimore	15	11	4 6	5 11	140
Ingot Anchor		11	9 6	0 11	148
Braziers' Copper, ordinary sizes,					
16 og. P sq. ft. and over			· 10	18	
Braziers' Copper, ordinary sizes,					
under 16 oz. and over 12 oz. W					
sq. fl	**		. 0	18	
Braziers' Copper, 10 os. and 12	**				
oz. W sq. ft	**			5 55	
Lighter than 10 oz. W sq. ft					
Circles less than 84 in. in diam	**	× × × ×			6
" 84 in. diam. and over	**				
Segment and Pattern Sheets	**				
Locomotive Fire-Box Sheets	*		60	20	
Sheathing Copper, over 12 oz. W	**				
8q. ft	6.6				6
Bolt Copper	21				0
Copper Bottoms					0
Nickel-Plated Sheathing			. @	35	0
" for boilers		95	. @	87	0
Plating extra	70.70	25 4	e 60	187	0

Flating extra. "25 ¢ @ 87 ¢ Flat Copper Boiler Bottoms or Pit Bottoms, cut to special sizes. " @ 21 ¢
Tinning.
14x45, by the case
O'Neill's Patent Planished Copper,-Net.
14 and 16 oz. and heavier. 30¢ By the case. \$\mathbb{P}\$ to 22¢ 12 oz. and lighter \(

14 and	7 in., 14x52. 8 in., 14x50. 9 in., 14x60. 16 o4 and heavier. 25¢ By the case. W ib (And all sizes not over 20 in. wide.)	31
14 and	24x48 and 30x60,	34
12 oz	16 oz. and heavier	37

### Copper Wire .- (See Wire.)

Sheathing Metal.	Hard White Shavings, No. 1
Yellow Sheathing Metal, & 16	Soft White Shavings, No. 1
BRASS AND GERMAN SILVER.	White Shavings, No. 2, Soft
Brown & Sharpe's Gauge the Standard for Metal :	Ledger and Writing
Old English Gauge the Standard for Wire,	Solid StockBook Stock, No 1, light
Brass Manufacturers' Price List, January 17	Old Newspapers
1584	Pure Manilas
A STATE OF THE PARTY OF THE PAR	Dolling agentions and stored and carried or

LEAD Dury : Pig, \$2 \$2 100 to ; Old Lead, 24 \$
D: Pipe and Sheet, 30 W D.
American 4 @ 4.1214
Bar
Pipe
Tin Lined Pipe
Sheet
Shot Drop, 6#; Buck, 76
Chilled Shot
A SUPPLY SELECTIVE
Hallett's 39 to 1014 @ 1034
Hallett's 9 b 1014 @ 1034 Cookson " 1054 @ 11
SPELTER—Duty: Pigs, Bare and Plates, \$1.50 100 lbs.
American, cash
Bergenport9
ZINC-Duty : Pig or Block, \$1.50 \$100 lbs
Sheet, 256¢ W To.
Sheet, 256 P To. 600 To casks
Sheet, 234 9 B. 600 B casks
Sheet, 256 P To. 600 To casks
Sheet, 234 9 B. 600 B casks
Sheet, 256   P D.   600 D casks
Sheet, 256   2   10.

	Fancy
	BABBITT METAL. N. P. U
	WIRE.   Rron   Wire Put up in 63 b bundles.   Nos. 00 to 9, 10, 11, 19, 18, 14, 15, 16, 17, 18.
-	10   11   11½   12½   14   15   16

Cita	vanize	F	enc	8	W	i	re							dis.			608	25 %
		110	ne	•	r		W	V	e	n.	v	12	14	W	ir	0.		
Nos		16	17		18		11	9	1	20		20	1	22	23	24	25	26
Cen	ts	14	15		16		11	9	1	20		21	ĺ	99	23	24		26
Nos		27	28		29		84	)	1	31		a	ŀ	33		85		
	ts														40		55	
Nos	. 16 to	18.												. dia.	70	6	70 &	5 1
	19 to															-	70 &	
	27 to	96												0.0	2%	Oh	78 A	5 W

	Steel Wire.
Cast Steel, Steel	Wire list
Brass	and Copper Wire.
Old English Ga	auge the Standard.—Dis 20 @ 30.

		High Brass	Low Brass	and
	Nos. to No. 16,			
in	clusive	\$0.22	\$0.96	30.30
No.	17 and 18	28	.27	.81
6.6	19 and 90	24	.28	.8
44	21	25	.29	.88
66	00		30	.80
4.6	23		.89	.86
44			.34	.88
46	24			
**	25		.86	.40
	26		.89	.41
	27	38	.42	-46
6.6.	28	42	.46	.51
6.6	29	45	.49	.54
8.6	80		.58	.69
6.0	81		.55	.07
8.6	82		.59	.78
6.6			.68	601
66	33			.04
44	34		.68	.96
	85		.74	1.80
8.6	86	76	.80	1.50
44	87	1.00	1.04	1.70
6.6	994	1.20	1.84	2.00

Solder.	
16 & 16.     Warranted     1184       Extra     11       No. 1 Refined     194       No. 2     94       Extra wiping     10	@ 10
Iron and Tinned, new list, Dec. 10, 1881	lis. 40

				***						
Iron and	Tin	ned.	new	list.	Dec.	. 10,	1881.	d	in. 40	8
In bulk,	new	list.	Dec	. 10,	1881.			d	is. 40	%
Copper 1	Rive	ts ar	id Bi					50&1	00.00	8
Nos	7	8	9		11			14	1	
₩ D	494	50¢	500	540	564	584	400	659	700	
			810	ve	Bol	ts.				
America	n Sc	rew	Co.'	B				d	is. 65	2

### FRENCH GLASS.

Sizes.	lst.	Sd.	8d.	4th.
6 x 8 to 10 x 15	\$9,50 10,50	\$8.50 9.50	\$7.50 8.75	\$7.00 8.00
18 x 22 to 20 x 30	12.50	11.00	10.25	9,50
26 x 28 to 24 x 86	15.00	18.50	11.75	
26 x 36 to 36 x 44	17.50	14.50 16.25	18.75	
30 x 52 to 30 x 54	19.00	17.00 18.00	15,00 16.00	
34 x 58 to 84 x 60	22,00 94.00	20,00	18.00	
Double	Thick.			

-								I	k	H	ıt	ole	Thick			
		-		81	ze	36.							1st.	ad.	8d.	4th.
6	x	8	to	10	x	15							\$12.00	\$10.75	\$10.00	\$9,00
11	x	14	to	16	x	94							14.00	12,75	11.75	10.7
18	X	22	to	20	x	30							17.00	15.50	14.50	
15	×	86	to	24	x	30		۰			0. 1		18,50	17.00	15.00	
26	x	28	to	24	x	36							20.00	18.00	16.00	
86	×	86	to	26	x	44	 						21.25	19.75	17.00	
26	x	46	to	80	x	50	 						28,50	21,25	18,75	
90	x	5:2	to	80	×	54							94,50	28,25	20,25	
io.	x	56	to	34	×	56		0 1					26,50	94,50	22,25	
		58											29.00	27.00	25,00	
96	×	60	to	40	×	60							32.00	30,00	98.00	

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fill Assorted Whites.																		ъ		6		1	534	1
Inbleached Muslins																		5	M	6	à.	-	6	ı
ity Whites, No. 1								٦,		ī							2	4	12	G	ă.		436	ł
New Canton Flannels																		5	-	6	ă.		534	1
New Seconds, light																		8	B.	6	ă.		4	1
dark																		ä	$\mathbf{c}$	6	5		å.	1
TARRED	10.1	1 /2			*				h	*			5.8	,	- 0	b	0	20	æ	13	е.	- 4	on.	
No. 2 Whites							m 1			90	20	e.,	. 1	,				28	26	G		- 7	274	1
Cotton Canvas					0							. :							м	6	а -	- 1	0	1
inen Canvas No. 1																		4	ĸ	6	А.	1	456	1
leconds, City No. 1															ı	ı		10	w	a	к.	- 1	132	1
leconds, City No. 2																		ī	Œ	ā	ā.	- 1	186	1
Colors, # cwt			-											-	•	1	4	ã	-	ã		154	0	ı
																		õ		73		-	21.0	8
fanila Rope	n 8	.00	* *			'n	ń)	19	10	ņ							0	е.		ч	р.	- 1	224	1
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Binders' Board Cuttings. 34 @	50 1 50
PAINTS, OILS, &c. Paints.	
Black, Lamp—Coach Painters'. # 10 22 @ Ordinary. Urory, Drop, fair. 12 @ Dest.	TO

This was	contrac, sas	Oak.			OBI	p, c	34	, .	100	ru		·		40	
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Iron Pa	aint, Bri	ght!	Red				- 63							20	12
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Minera	Paints.														
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Red Le	ad Amo	wice	F)										-		
66 Ve	ad, Ame netian (	Fra	Adway						2.4			ri.	6	56	ď
44 V C	merman (	EIR	Jury.			100	14				:3	P.	, and	1	Р.

@ 7.50¢	" Indian Dry
	Bienna, American Raw, powdere
8.	Burnt, powdered
17, 18,	Umber, Burnt, powered
	in oil
15 16	" Baw, powdered
70&5 % lis 50 %	Vermilion, Chinese
lis 70 s	" English
70.8:5 g	White Lead, American, pure dry
	White Paris, English Prime
70&5 %	Yellow Ochre, French
65&5 %	" Vermont

SE SE		Vir		.000	<i>b</i> 00	Zine W
	28	23	24	25	26	
	99 33	23 34			26	T immee
	87	40	45	55		Linseed
	CER	. 70	@	70 & 70 &		Bleach
	66	75		75 &	5 %	fit on a l
	+0			55 &	0,5	Signal . Prime l

PI A SPITTEGE	Stone	WARE			20 00 11 70	
		Steel	Wire.			
st Steel, S	Steel V	Vire list		dis	. 8585 \$	
			opper			
Old Engli	sh Ga	uge the	Standard	1Dis 20	@ 30.	

															Common High Brass		OW BBB	Bronze and Copper.
ll.	Nos.	ŧ	O	)	N	Ī	Э.		1	6	4				_			
	clusi															\$(	), 26	\$0.30
0.	17 a																.27	.81
6.6	19 €	u	n	d	5	X	١.								.24		.28	.89
44	21.														. 25		.29	.88
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6.6	23.																.82	.86
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44	25.																.86	.40
	26.														.35		.89	.48
	27.														.88		49	.46
6.6	28.																46	.51
5.5	29.																140	5.4
6.6	30														48		150	.62
6.0															- 200		ALK:	.67
8.6	31																100	.07
64	32														.55		.59	.78
64	33														.59		.68	.884
2.0	34			۵	0			0	0					0	.64		.66	.95

				ol										
16 & 16, Warran	tec	1.						 	0		 .1	194	0	12
No. 1 Refined												994	@	10
No. 2 " Extra wiping												916	0	1012
Extra wiping				1				•				0	(C)	10%

				REL	vets					
Iron and	Tin	ned,	new	list.	Dec.	10, 1	1881.	d	is. 40	%
In bulk,	new	list.	Dec	. 10,	1881.			d	is. 40	8
Copper 1	Rive	a ar	d B	urrs			dis.	50&10	00,00	8
Nos	7	8	9	10	11	12	13	14	1	
₩ D	494	50¢	500	54¢	564	584	400	654	700	
					Bol					1
America	n Sci	rew	Co.	B				d	s. 65	2

							B	in	gle	1	Thick,			
_			Т	8	ine	18.				1	1st.	9d. j	Bd.	4th.
11	×	44	to	16	K	15.	 0.			-	\$9.50 10.50 12.50	\$8.50 9.50 11.00	\$7.50 8.75 10.95	\$7.00 8.00 9.50
15	X	36 28	to	24 94	×	30. 30. 86.					14.00 15.00	12.75 18.50	11.00	9,50
16	X	46	to	80	x	50. 54.	 				16.00 17.50 19.00	14.50 16.25 17.00	19.95 18.75 15.00	
14	x	58	to	84	X	56. 60.	 				20,00 22,00 24.00	18.00 20,00 22.00	16.00 18.00 20.00	

Doubl	e Thick	C		-
Sizes.	1st.	ad.	8d.	4th.
6 x 8 to 10 x 15	\$12.00	\$10.75	\$10.00	\$9.00
1 x 14 to 16 x 94	. 14.00	12,75	11.75	10.7
8 x 22 to 20 x 30	. 17.00	15.50	14.50	
5 x 36 to 24 x 30	. 18.50	17.00	15.00	
6 x 28 to 24 x 86	20.00	18.00	16.00	
8 x 86 to 26 x 44	91.95	19.75	17.00	
8 x 46 to 90 x 50		21.95	18,75	
x 52 to 80 x 54	94,50	29.95	20.25	
x 56 to 34 x 56		94,50	22,25	
1 x 58 to 31 x 60		27.00	25,00	
0 - 60 4- 40 - 60	99.00	20.00	60,00	

### PAPER STOCK, &c.

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anton	Flannels	i.																					5	6
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P ME: 20¢; C, Wire.	FAL 14¢.		. 19 1b 7	@ 7	,50¢	" Burnt, powdered
		18, 14,			18.	Umber, Burnt, powered
		1916			10	Baw, powdered
et Wire.				.dis	50 %	Vermilion, Chinese English
Wire, No rket Wir	0	)				White Lead, American, Comn
Wire, N	os. 10	to 14 )				White Paris, English Prime.
mer Stee rket Wir	e		dis			Yellow Ochre, Frenchin oil

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Galvanized Stone Wire "	55 & 5 \$
Steel Wire,	
Cast Steel, Steel Wire listdis.	65&5 x
Brass and Copper Wire.	
Old English Gauge the Standard Dis 30 6	30.

	,,,,			9											Common High Brass	Low Brass	Gilding Bronze and Copper.
III.	No	ı.	ŧ	0	1	N	0		1	6	١.						
in	clu	gj	V	e							ï				\$0.22	\$0.26	20,30
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6.6	19	1	u	36	ť	9	Ю	ì						Ĭ	.24	.98	.89
44	21														. 25	.29	.88
66	99															.80	.84
6.6	23														.28	.82	.86
4.4	24														.80	.34	
46	25														.82	.86	.40
	26														.35	.89	49
															.88	49	40
6.6	27														.42	46	.51
66	28															.40	
	29														. 45	.49	.54
6.6	30	١,												0	. 48	.568	.62
6.6	81									_					.51	.55	.07
6.6	82														.55	.59	.78

	lder.
16 & 16, Warranted	
Extra	11 @ 1134#
No. 1 Refined	9%4 @ 10 #
No. 2 "	
Extra wiping	10 @ 101/4#
Ri	vets.

				***						
ron and	Tin	ned.	new	list,	Dec.	10,	1881.	d	in. 40	8
n bulk.	new	list.	Dec	. 10,	1881.			d	is. 40	%
opper I	live	a ar	d Bi	IFTS			dis.	50&1	00.00	8
Nos	7	8	9	10	11	12	13	14	1	
₩ D	494	50¢	500	54¢	564	58#	604	659	700	
			Sto	ve	Bel	ts.				
merica	n Sci	rew	Co.'	B				d	is. 65	2

# 

Prices current per be List, Septen			re feet	•
Single '	Thick,			
Sizes.	1st.	Sd.	Bd.	4th.
6 x 8 to 10 x 15	\$9,50 10,50	\$8.50 9.50	\$7.50 8.75	\$7.0

																\$7.50		
L1	X	44	to	10	K	201		0.4	0.	9	0		0.0	10.50		8.75		1
18	×	22	to	20	X	30	1.				0			12.50	11.00	10.25	9,50	1
		36													12.75	11.00	100	
26	×	28	to	94	X	86					0		0.0	15.00	18.50	11.75		1
96	X	36	to	26	×	44			2.1			١		16.00	14.50	12.95		
		46													16.25	18.75		
ıÓ	x	502	to	80	×	54								19,00	17.00	15.00		
i0	x	56	to	84	x	56								20,00	18.00	16.00		Г
4	x	58	to	84	x	60								22,00	20,00	18.00		
16	X	60	to	40	×	60			.,		. ,			24.00	22.00	20.00		
**			-						D	0	u	b	le	Thick				ı
_		-		84	20	a	Т			_	_	Т	1	1st.	9d.	2d. 1	4th	

				8	lzε	ж.			_	-	_	1st.	9d.	8d.	4th.
6	×	8	to	10	×	15			7			\$12.00	\$10.75	\$10.00	\$9.00
														11.75	
8	X	22	to	20	x	30	 		 			17.00	15.50	14.50	
5	×	86	to	24	x	30		۰	 			18,50	17.00	15.00	
6	x	28	to	24	x	36			 			20,00	18.00	16.00	
8	x	86	to	26	x	44	 		 			91.95	19.75	17.00	
6	×	46	to	30	x	50			 			28,50	21,25	18,75	
Ü	x	52	to	80	×	54			 			94,50	28,25	20,25	
Ö	x	56	to	34	×	56		0 1	 			26,50	24,50	22,25	
4	x	58	to	84	×	60				0		29.00	27.00	25,00	
ď.	-	60	to	40	w	60						39.00	20,00	98.00	

Sizes above—\$15 per box extra for every 5 inches. All sizes above 52 inches in length, and not making more than 81 united inches, will be charged in the 84 united inches bracket. An additional 10 er cent, wid be charged for all Glass more than 40 aches wide. Discount 60230 to 70 per cent.

	(Dealers	Selling	Prices.	)
irt	Cuttings,	No. 1 No. 2		

White

" No. 2 814 @	6	
Mill Assorted Whites 5 6	514	
Unbleached Muslins 5M @	6	
City Whites, No. 1	436	
New Canton Flannels	532	
New Seconds, light 3866	4	
" dark 294 6	8	
No. 2 Whites 234 @	284	
Cotton Canvas 4% 6	500	
Linen Canvas No. 1 456	484	
Seconds, City No. 1 114 6	182	
Seconds, City No. 2 114 @	186	
Colors # cwt	50	
Mantla Rope 8	314	
Manila Rope	207	
Gunny Bagging, No. 1	200	
" No. 2 114 60	186	- 1
Kentucky Bagging 4 @	-200	
Burlap Bagging, No. 1 146	2	
Tar Shakings 196	2	
Hemp Twine Stock 3% 6	4	
Hard White Shavings, No. 1	4	
Soft White Shavings, No. 1 844	344	
White Shavings, No. 2, Soft 914 @	244	
Soft White Shavings, No. 1	99.2	
Ledger and Writing 2% @	378	
Solid Stock 1% 6	8	
Book Stock, No 1, light	114	
Old Marrayana	279	

# 

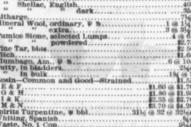
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١	There There	m Dry						0 0 0		.0 9	9 41
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	Bienna, Al	merican I	Raw. D	owder	ed.						
1	44 Bu	irnt, powe	hered								44
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1	THE PERSON							TT (	ga i	10 6	9 20
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ı	44 B	aw, powd	ored						313	4 G	71
4	66	il mort	Or our					0	20. 1	00.0	. 41
1	FF	In ou.						ro e	p 1	ro a	p 980
1	Vermilion	, Chinese									. 191
1	40	English							4	10 a	1 48
1	6.6	America	an Co	200,000,000							.11
ı	White Lon	A smante	man, coo	ann der		0000					6
1	White Lea	u, Americ	mu, pi	are dry	201	1112	20 + 1	0.27	0.0		1 117
1											
ı	White Par	is, English	h Prin	MD						@ S	236
ı	Yellow Oc	hre. Frenc	·h							1	11.7

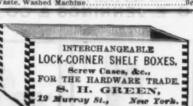
	White Paris, English Prime
\$5 %	Yellow Ochre, French
25 %	" in oilasst'd c
65 %	Vermont
	Yellow Chrome
25 %	Zine White, Amercan No. 1, dry No. 1, in oil
	Zine white, Amercan No. 1, dry
	Pannoh (Panis Thur)
26	French (Paris Dry)
26	In out.
100	Olls.
	Linseed, Raw. in casks and bhis

					4.01	I I I I I				
	Linseed, Raw. in Boiled,		6.6			9.0				
ķ	Bleached Whale.	30	-	-1				0 0		
ĸ	bleached while.	41	86		 					
7	" Sperm									
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-1	No. 1 Extra				 		0.0			
6	West Virginia				 					
	Drilling				 					
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1	Drilling
	Miners' Oil
1	The state of the s
1	Fish Oil. Pressed
1	Neatsfoot
1	The 11
1	Tallow
1	Empire Cylinder Oil. Machinery.
1	Machinese
1	machinery
1	Engine
ı	
ŧ	Sundries.
ı	
ı	Asphaltum, Cuban
ı	The state of the s
ŧ	Trinidad Renned # ton, \$5.29
ŧ	Benzine F gal
ı	Chalk
ß.	CIAMARIA

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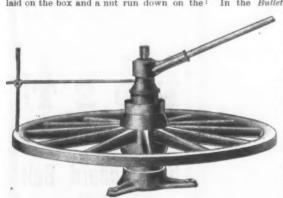
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### HARDWARE NOVELTIES.

### A Skein-Box Press.

A Skein-Box Press for pressing skein-boxes A Skein-Box Press for pressing skein-boxes into the hubs of wheels, which method is superseding the old plan of driving and wedging them, is manufactured by the Illinois Iron and Bolt Company, of Carpentersville, Ill. A general idea of the press may be gathered from the accompanying cut. The base of the press is of cast iron, and we have the tite and the company in the company i and made so that it may be bolted to the floor. A wrought-iron screw extends up from the base, over which the hub and skein-box are placed. The hub and skein-box being thus placed in position, a cap is laid on the box and a nut run down on the

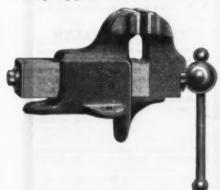


A Skein-Box Press.

the additional cost of pig iron in 1884 over 1878 is screw-threaded bar, and pressing on the skein-box forces it into position. A gauge, as shown in the cut, is arranged to indicate when the box is in. With this machine boxes can be placed into hubs in better shape and in much less time than could be done by the old method of driving, and it is claimed that enough skein-boxes was awad. claimed that enough skein-boxes are saved from breakage by the use of this press to pay for it in a short time.

### The " I. I. & B. Co. " Vise.

1 The Illinois Iron and Bolt Company, of Carpentersville, Ill., manufacture a new Vise, known as the "I. I. & B. Co." Vise, for which they claim superior merits. Refer-ring to the accompanying cut, which illus-trates the vise, it will be noticed that there is a very long bearing in the stationary jaw, thus giving great steadiness in the motion of



The "I. I. & B. Co." Vise.

the sliding beam. The jaws are faced with L-shaped pieces of steel welded to them, as shown in the cut. The screw, which extends through the entire length of beam, is made with a shoulder at one end and works against the beam, while the other end is held in place by a nut and washer, thus preventing lost motion. The vises are said to be made of the best material and to be very strong and durable

### Patent Metallic Vise Flange.

The accompanying illustration represents the Patent Groove Bench Screw, with Patent Metallic Vise Flange, which is made by the Ohio Tool Company, Columbus, Ohio, and of which they are the patentees and sole manufacturers. The operation of this improvefacturers. The operation of this improvement will be readily apprehended without a detailed explanation, and for it the following advantages are claimed: That it obvittes move. Scientists are at a loss to account

chine in 14 minutes left nothing to be desired. Taking into consideration all the advantages and drawbacks attending these trials, it is, I think, the general opinion that both for this machine and for that of Death

In the Bulletin of January 7, at the close of the article on production and prices of pig iron in 1884, you say: "In mill irons the present price of \$16 at Philadelphia is still about \$1 above the lowest price in 1878." Now, while this is literally correct on the sirely covering for the single question of prices, it is misleading if taken in connection with the present cost of pig iron; because, Philadelphia cost \$3.22 per ton on an average for the year 1878, while in 1884 the average was probably \$4.50, and as it takes, say, a ton and a half of coal to make a ton of pig iron, the additional cost of pig

These facts justify me in saying that pig iron, bar iron, nails, and similar articles having pig iron for their base, are lower to-day, in proportion to their actual cost, than they have been in 40 years, or since records were kept of the exact figures. A moderate consumption continues, and stocks of goods are low, the demand being at the minimum, and will continue so while prices decline But the bottom once reached (and we hope that has occurred, because the most favored producers cannot meet current prices), an increased demand and better prices must be near. My fear is that a slight reaction will bring an avalanche of orders, now withheld, and thus repeat the unfortunate experience of 1879.

### INDUSTRIAL ITEMS.

### MASSACHUSETTS.

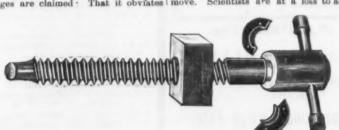
The 300 cutters of the Lamson & Goodnow Cutlery Works, at Shelburne Falls, who had been on strike for five weeks, returned to work last week on the terms offered by directors, namely, a cut ranging from to 15 per cent The strike began when 10 to 15 per cent The strike began when President Lamson announced a horizontal cut of 25 per cent.

At Worcester, on the 13th inst., a fire destroyed the shops of Alonzo Whitcomb & Co., machinists' tools; G. H. Bushnell & Co., machinists and press manufacturers, and badly damaged the Rice & Griffin Mfg. Co., manufacturers of sash, doors, blinds, &c.

### CONNECTICUT.

The roof of the new Canfield Rubb Company, Bridgeport, is nearly completed. The exterior of the structure is the most ornamental for factory use in the city. At the northwest corner the mason work is carried up in the shape of a tower, and this surmounted by a turret of considerable hight.

The Winchester Arms Company, of New Haven, have abandoned their attempt to bore an artesian well for water, after going down 2400 feet without securing a supply. The contractor had reached this depth six months ago, when some evil-disposed person



Ohio Tool Co.'s Bench Screw, with Patent Metallic Vise Flange

the necessity of mortising the jaw of the for the absence of water at the great depth vise, and thereby weakening it; that it secures accuracy in working; that it does away with the friction and wear of the end NEW YORK. of the head of the screw against the jaw of the vise; that less strength is required in tightening; that the jaw is carried squarely tightening; that the jaw is carried squarely and firmly and works more freely than in the ordinary vise, and that the flange adds strength and durability to the vise at the essential point. For the purpose of intro-ducing these goods they are sold for the present at the same price as the ordinary bench screws.

The Calcutta correspondent of the Ironmonger writes that the trial of the American fiber-extracting machines came off in the presence of a number of gentlemen con-nected with the fiber industry, merchants, &c., on October 29. The machinery was worked by Madrasee natives With rhea, 80 pounds of stalk were brought away, the fiber being quite clean and free from gum, in 32 minutes. Three men worked the machine, two supplying and regulating the feed-bed and one removing the fiber to the drying railings. Forty pounds of Sansiviera The Chicago Screw-Driver Works have computed in 24 minutes, but worth Bros., of Coatesville, have computed worth and so successfully, though the 30 pounds of agave which were passed through the made worth and the made wor

A consultation of the different interests A consultation of the different interests has been held at Newburg, and it is very likely that arrangements will be perfected by which the assignee of Ward, Stanton & Co. will be enabled to complete the Hoboken Land and Improvement Co.'s iron ferry-boats, Hopatcong and Musconetcong, on which some work had been done when the assignment was made. Two hundred or more men will then be put to work, and it will take three or four months to finish the boats. The assignee has not yet got his schedule made, but his counsel says that the

The Lehigh Zinc and Iron Company, at Bethlehem, on January 16 commenced blowing out their furnace for repairs. The company have had a very successful run for four years, manufacturing spiegeleisen.

same place, full time, and there is some talk of the Coatesville Iron Company's mill being started at an early date.

The rolling mill of McLanahan, Smith & Co., at Hollidaysburg, has started up on full time, after a long suspension, and all hands are at work again. Their nail factory still remains idle, with no prospects of resuming.

The Fishback Rolling Mill, at Pottsville idle for several weeks, owing to a lack of orders, has resumed work full-handed and on full time, with prospects of steady work

Neshannock Furnace, of the Crawford Iron and Steel Company, Newcastle, blew in on January 13.

The Thomas Iron Company are pre-paring one furnace at Hokendauqua and one at Lock Ridge for blowing in, making five in blast at the former place and two at

Robert H. Coleman, of Lebanon, has com-nenced excavations for a new blast furnace near his No. 2 Colebrook Furnace. The new tack will be a large one.

The workmen at J. P. Witherow's hot-blast works, at Newcastle, have been notiaccording to your own fied of a 10 per cent, reduction all round, to statistics, anthracite coal in take effect on January 18.

It is reported that the Lancaster Watch Works are to be removed to Chicago, over-tures from capitalists of the latter city having been accepted by those interested in the

On Saturday the stack of a heating furnace attached to the Blandon Rolling Mill blew down during the prevalence of an un-usually violent wind storm. The stack was 50 feet high and was red-hot. It crashed through the blacksmith shop, but injured nobody seriously.

The Saucon Iron Company's furnaces and railroad, at Hellertown, were recently pur-chased at sheriff's sale by the Thomas Iron company and Samuel Thomas, the holders of the first mortgage bonds. At Easton, on the 19th inst., a new company was formed, and Samuel Thomas, president of the Thomas Iron Company, was made president. It is to be called the Saucon Valley Iron and Railroad Company, and will have a capital of \$50,000. The directors are J. T. Knight, Samuel Drake, Charles Stewart, Daniel Runkle, W. W. Marsh and B. G. Clarke, all well-known iron men

The man who makes arrangements every few years to move the Baldwin Locomotive Works out into the country is again at work.
This time the works are to be transported
bodily to "a point on the Schuylkill between
Mt. Clare and Perkiomen." The strangest thing about this is that the proprietors of the works know nothing about the move and haven't any idea of leaving Philadelphia.

Leesport Furnace will be blown out some time next month, when extensive repairs to the furnace will be made.

### PITTSBURGH AND VICINITY.

At Sharpsburg, on Monday, there was an Moorhead Brothers & Co., owners of the Vesuvius Iron Works. Immediately after the explosion the store and the mill offices took fire and were destroyed. The mill proper was saved with the greatest difficulty.

The Pittsburgh Steel Casting Company nanufactured in 1884, besides steel castings and high-carbon steel, 3740 gross tons of low-carbon steel, to be used for deep stamping purposes, rivets and locomotive tubes, which purposes, rivets and locomotive tubes, which must show a perfect weld and stand cold flanging. The carbon aimed at was about .10 and manganese about .35. Below we give the chemical results, believing these to be the most uniform successive 932 heats (except one red-short) on record of any kind of soft steel ever manufactured. There were not so pounds returned out of the 2740 were not 50 pounds returned out of the 3740 tons, nor was the company asked to pay any damages for bad steel that was used for the purposes named above :

	No. of	Average carbon for each	Average manganese for each
_ 1884.	heats.	month.	month
January		.097	.836
February	74	.098	.398
March	193	.097	.819
April	79	.008	.818
May	No	low heats n	nade.
June	95	.007	.881
July	68	.094	.390
August	143	.098	,860
September	140	.088	.348
October	7	.067	.850
November		.100	.343
December		.097	.830
Total	981		***
Average of carbon manga		year	

A reduction of 10 per cent. in wages, recently announced by Dilworth, Porter & Co., Limited, affects certain employees who belong to the Amalgamated Association, and the latter have ordered a strike.

All the mills of Oliver Bros. & Phillips are at present at work. The employees of the Woods Run Mill, Allegheny, in view of the embarrassment of the firm, notified them that they were willing to go to work at the reduction against which they were striking, and the mill was accordingly started; and the Tenth and Fifteenth street mills, on the Southside, are in operation pending the decision of the Amalgamated Association regarding the reduction in the wages of the

A reduction of 10 per cent. was on January 13 announced in the wages of employees of the Iron City Chain Works, operated by McKay, Hammond & Co. There are 70 men and boys effected, 35 of whom

boats. The season schedule made, but his counsel says that the schedule made, but his counsel says that the liabilities are about \$125,000 only. The assets consist of a small amount of material licensees protected by numerous patents, are now manufacturing and supplying gas regulators and cut-offs for the control of natural control of cont ral gas for mills and private houses, which they propose to furnish to all natural-gas companies on terms that will make their use general. It is believed that the economy in the cost of street mains and the safety insured to consumers will place all companies using these special devices in a more favor-

private houses and mills, insure a constant pressure in the house pipes unaffected by change of pressure in the mains, and, in the event of the supply failing in any way, the cut-off valves close, so that they cannot again be opened until all of the stop-cocks within the various houses or mills have first been closed—a feature absolutely essential for safety, and one likely to be made necessary by the action of the underwriters. These regulators are so constructed that a predetermined amount of gas per hour can be dis-charged, making them, in effect, regulators with carbureters insure from natural gas a beautiful and steady light.

The mills of Kirkpatrick & Co., at Leechburg, and the Chartiers Iron and Steel Com-pany, at Mansfield, have resumed operations and are running full in all departments. The firms have a fair number of orders, and will not close down their works until compelled to do so for want of business. No reductions of any consequence has been made in the wages of employees.

The Coal Trade Tribunal, which has been endeavoring for some time to fix the rate for mining in the railroad mines of this district, have failed to agree, and the matter will be referred to the umpire.

The Canonsburg Iron Works, which have been closed down for several weeks, were to resume on last Monday, running full in all the departments. The works were shut down in order to take stock and make im-provements. A large addition was made to the mill. The firm have orders which will keep them busy for some time.

The Miller Forge Company, at Rankin Station, are making a steel shaft for a United States man of-war, which will be completed in two months.

At Harlan & Hollingsworth's shipyard, Wilmington, the mail boat Cape Charles, which is to run between Cape Charles and Norfolk on the New York, Philadelphia and Norfolk Railroad, was launched last week The boat is 262 feet long on the deck, 36 feet beam; breadth over guards, 64 feet; depth of hold, 14 feet. She is built extra strong, of iron, and is expected to make 18 miles an hour. She can carry two Pullman sleeping cars, an express car and a combination car on her deck, and is fitted up with saloon cabin, &c., and is to be handsomely furnished and illuminated by electric lights.

Etna Charcoal Furnace, at Ironton, ran Etha Charcoal Furnace, at Ironton, ran 202 days the past year, and made 2317 tons, an average of 11.47 tons per day. The best run was during the month of December, 293 days, when the product was 388 tons, or a daily average of 13.04 tons. The product was all A I cold-blast iron.

At a meeting of citizens and rolling-mill employees, on January 14, at Warren, a committee was appointed to solicit subscribers to a fund to start the Westlake Rolling Mill on the co-operative plan. It is stated that a proposition has been made to the assignee of the Westlake estate to lease the rolling mill for six months for the taxes and the cost of insurance, and that the assignee has expressed a willingness to accept the terms.

A moderately strong vein of gas has been struck at the well of the Belfont Iron Works Company, Ironton, at a depth of 202 feet. The vein is, of course, only a surface vein, but is a good indication of what may be expected at a greater depth.

expected at a greater depth.

Morgan Williams & Co., proprietors of
the Steam Hammer Works, of Alliance,
have paid off and dismissed 50 more of their
men. About 150 men have been discharged
from these works in the past three months.
Only about one third of the regular force remain and they have been reduced to eight hours a day. Lack of orders is the cause of the reduction of force.

Emma Furnace of the Union Rolling Mill Company, Cleveland, which blew out Decem-ber 6, is being relined. The job will proba-bly be completed by February 1, when she will be started again.

The flint glass manufacturers of Bellaire, Bridgeport and Martin's Ferry are confer-ring with their workmen with a view of arriving at a settlement of the differences that now exist as to the plan of working, which has caused the factories and workmen to be idle since December 16.

The Irondale furnace and rolling mill property, at Steubenville, has been sold by the sheriff to a Pittsburgh syndicate, who will wreck the mill and sell the machinery. The mill originally cost \$250,000, and was bid in for \$25,334.

The reduction of 10 per cent. in the wage of all employees not governed by the scale recently decided upon by the Youngstown recently rolling-mill proprietors went into effect on January 12. No reduction was made at the works of Brown, Bonnell & Co. The reduction was accepted by the workmen without objection.

The trouble between Summers Brothers & Co., of Struthers, and their employees has been amicably adjusted and their mill has started up. We are not advised as to what effect this will have upon the plan of the firm, recently mentioned in these columns, to convert their mill into a steel sheet mill.

The Youngstown Car Works have re-ceived several large orders and have increased their force.

### ILLINOIS

A galvanizing plant of 10 tons daily capacity has just been completed at Joliet, to run in connection with the Joliet Barb Wire

The Springfield Watch Factory gave notice that two-thirds of their employees would be thrown out of employment after Saturday last. The factory usually employs 1200 hands, but has been in very unprosperous condition for some time, employing only 600 hands since September. This leaves only 200 hands now in employment.

The Chicago Screw-Driver Works have

There are being built at the Hercules Iron Works, Chicago, several 50-ton refrigerating machines. The working force of this establishment is to be increased

Two hundred and twenty-five men are now employed in the new pipe-mill of the Crane Brothers Mfg. Co., of Chicago, which started up on January z

### INDIANA.

The New Albany rail mills have resumed work after a long period of idleness. They charged, making them, in effect, regulators of pressure and of quantity. The company will also make regulators to reduce the pressure for illuminating purposes. These used with carburater in purposes. These used immout of the market on heavy railroad with carburater in purposes.

> The New Albany Rolling Mill continues in full operation, mostly on orders. The mill is also replenishing its stock of merchanta-ble iron, which had run down to very little on hand

> Chas. Hegewald & Co., of New Albany, are taking advantage of a dull season with them to have some extensive repairs and improvements done to their foundry and machine buildings

### MICHIGAN.

The production of the copper mines of Lake Superior for December was as follows: Calumet and Hecla, 2355 tons; Quincy, 260; Atlantic, 363; Franklin, 227; Allouez, 150; Huron, 120; Peninsula, 70; Hancock, 41.

### MISSOURI.

Last week Leslie A. Moffett was appointed Last week Leslie A. Moffett was appointed receiver of the Harrison Wire Works by Judge Lubke, of the Circuit Court. His bond was fixed at \$25,000. This action was taken under the application made by A. B. Hart, representing himself and certain other stockholders.

The Excelsior Stove Works, St. Louis, have resumed operations, employing about 50 per cent. of their usual working force, but expect to increase it to the full number very shortly.

The Pacific Barb Wire Company, of St. Louis, have begun the manufacture of hog

The Missouri Furnace Company are, it is stated, contemplating the early starting of one of their blast furnaces.

Midland Furnace, at Midland, Crawford bounty, was to have blown in last week. The stack has been relined.

Sligo Furnace, in Dent County, is having earth put in and will blow in again as soon as the repairs are completed.

Bellefonte Furnace will stop operations the latter part of next month and not run any more this year.

Messrs. Snead & Co., of Louisville, have just finished some heavy and elaborate architectural castings for Atlanta, Ga., most of it for the Kimball House

### ALABAMA.

The Alabama Great Southern Railroad Company have decided to increase their capital stock \$1,000,000. A portion of this will be used in the erection of large machine shops at Birmingham, which have for some time been in contemplation.

It is reported that a company has been organized at Oxana for the manufacture of steel. It is said that the stock has all been subscribed, and that the erection of large works will begin at once.

### VIRGINIA

The Lobdell Car Wheel Company, of Wilmington, Del., will not run their Brown Hill Furnace this year. Their Walton Furnace, which made 1554¼ tons in 222 days of the year 1884, will make a full blast this year. White Rock Furnace, which ran but 20 days in 1884, will be in operation during 30 days in 1884, will be in operation during part of 1885.

### WEST VIRGINIA.

During the week ending December 31 the blast furnace of the Riverside Iron Works made an output of 1036 gross tons of No. 1 Bessemer pig. The furnace measures 75 x 17 feet, and has but recently attained this large production, which is entirely due to careful nanagement and working.

The steel plant and nail factory of the Riverside Iron Works, Wheeling, which was idle last week, owing to a difficulty with the employees, started up on Monday, the Amalgamated Association consenting to the operation of the works pending the settlement of the dispute. The upper mill of the company, which makes bar iron and light rails, is also in operation.

### TENNESSEE.

C. H. Beresford is opening for other parties an extensive coal mine at Anderson, and also a marble quarry. He reports that a bucket factory, a paint factory, a blast furnace and a short railroad will also be

A press telegram from Chattanooga, dated the 16th inst., says: "The industrial qutlook is brightening very materially. The Citico (100-ton) Furnace, which has been out of blast for four months, began operations to-day and will make its first cast next Monday. Chattanooga Furnace, which has been out of blast two weeks, resumes on Monday. The forces of hands at the Alabama Great Southern car shops and at the Chattanooga cotton factory are being increased on account of inpouring orders, and all the iron men report an extraordinary increase of inquiries from all parts of the country. Three saw-mills started up to day and two more will start next week.

On the night of the 26th of last December on the night of the 20th of last December the pattern and casting shops connected with Wm Kehoe & Co.'s iron works at Savannah were destroyed by fire. At present the firm are only erecting temporary structures, and not substantial brick buildings, as incorrectly reported by some journals. Early in the spring, however, they propose to put up buildings of that kind.

A cable dispatch from London, dated the 19th inst, states that Sir William George Armstrong, the inventor of the famous Armstrong gun, is about to start large steel works near Naples.

Safet

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Phila

WM.

New Yor DEAR S The sent us night se few nig No. 7 B

NEW

WILE

LIGHT

WILL

At Pittsburgh, on the 15th inst., an an nouncement of suspension of payment was made by the firm of Oliver Bros. & Phillips, who are among the largest iron manufacturers of that great iron-making center. The announcement was made in the following form :

To our creditors: We are to-day compelled to suspend payment, and propose calling immediately a meeting of those interested, to whom we selieve we can show assets amply sufficient, with some indulgence, to pay every dollar of our liabilities.

OLIVER BROS. & PHILLIPS, OLIVER & ROBERTS WIRE Co. Limited.

The members of the firm are also interested in the Isabella Furnace Company and H. B. Scutt & Co., Limited, the latter firm being extensive manufacturers of barb wire, but it is stated that these two establishments are not involved in the business troubles afflicting the two firms whose names are appended to the foregoing notice. Advices from Pittsburgh say that it is impossible to guess at the liabilities of the firm. reported at from \$3,000,000 to \$5,000,000. Bankers say there is about a million or a million and a half of paper held at Pittsburgh, with good collateral for almost all of it.

Large blocks of the paper are held in the Eastern States, as far east as Massachusetts, while very large sums are carried in New York and Philadelphia. The firm have made large investments in real estate, and have an immense amount of collateral of various

The history of the rise of the firm of Oliver Bros. & Phillips is one of the most remarkable in the annals of the country. Seventeen years ago H. W. Oliver, Jr., John M. Philips and William J. Lewis entered into a copartnership for the manufacture of iron. partnership for the manusacture, Jr., up The business career of H. W. Oliver, Jr., up to 1867 had embraced the performance of the duties of shipping clerk for Graff, Ben-nett & Co., of Pittsburgh, and the filling of a clerkship under William Thaw in the employ of the Pennsylvania Railroad Company Phillips was a bricklayer and Lewis a prac tical ironworker. They built a small mill at the south end of the Tenth street bridge. Oliver kept the books, while Lewis and Phillips looked after the practical part of the work. Their outfit consisted of two puddling furnaces and one heating furnace, and the product was wheeled away on barrows. From this humble beginning has grown the great firm of Oliver Bros. & Phillips, which now employ over 4000 men, principally in the Allegheny, Monongahela and Birming-ham iron works, situated at Wood's Run, ham iron works, situated at Wood's Run, Allegheny City and at Tenth and Fifteenth streets, Southside, Pittsburgh. In these mills are produced bar, plate and angle iron, skelp iron and light T-rails. Part of their rolled iron they work into heavy hardware, such as bolts, nuts, washers and hinges, wagon fittings, &c. Altogether they have 107 single puddling furnaces, 23 heating furnaces and 14 trains of rolls, their annual capacity for the production of rolled iron aggregating 97.500 net tons.

gregating 97,500 net tons.

Their success in the manufacture of iron led them to make ventures in other directions. One was the manufacture of barb wire, into which they entered quite extensively. About 18 months ago H. W. Oliver, Jr., visited England, and on his return he imported workmen and erected a steel mill, containing a Clapp & Griffith's 2 ton Bessemer converter. The present members of the firm are H. W. Oliver, Jr., D. W. Oliver, George Oliver, J. B. Oliver, J. M. Phillips and several relatives of the original proprie-tors. Harry W. Oliver, Jr., is the bestknown member of the firm outside of Pitts-burgh, by reason of his candidacy for United States Senator in 1881 and his membership of the Tariff Commission. His railroad speculations have been on a large scale, and he is said to have made \$400,000 in a single venture in Lake Shore stock alone. The opinion is general that the creditors of the firm will act leniently with the embarrassed manufacturers, and that their extensive property will not be sacrificed by a forced settlement of their affairs. If left in the hands of the firm, they will doubtless be able to so manage it as not only to pay all their chief their chief. their obligations in time, but to retain their

### TRADE PUBLICATIONS.

Rails, Switches, Frogs, &c.

We have received from the Pennsylvania Steel Company, of Steelton, Pa., two descriptive and illustrated catalogues of their manufactures. One of the catalogues, which has reference only to the various sizes and shapes of steel rails which they make, is a very elaborate and valuable trade publica-tion. It is a pamphlet some 6½ x 11 inches in size, bound in cloth and containing over 100 pages. The first few pages are devoted to a description of the works of the ompany, which comprise an open-hearth plant and blooming mill, Bessemer steel plant, blast furnaces, merchant rolling mill and a frog switch and signal department, besides a repair department which includes a number of different shops. In connection with their works the Pennsylvania Steel Company in 1882 erected a handsome school building to provide for the education of the youth of their employees. The remaining pages, which constitute the greater part of the pamphlet, are devoted to rail sections, showing the rails in full size, and giving the weight, dimensions and exact shapes of the different rails. Every alternate page illustrates a rail section, and opposite it are given a list of the railroads on which the rails are used. The rails, inclusive of those employed on street railways, are made in sizes varying from 70 to 20 pounds in weight per yard, the smaller sections being for mine While the descriptive matter in such a catalogue is necessarily restricted to a simple statement of weights and dimensions. the information contained is nevertheless of great value, as the efficiency of the different ull descriptions of the above-mentioned and

Suspension of Oliver Bros. & Phillips. many other railroad fittings. In the absence of below held the defense good, and dismissed more specific literature on the subject these two pamphlets would constitute a valuable treatise on rails and railroad appliances of the kind enumerated.

### Obituary.

Prof. William Wagner, founder of the agner Free Institute of Science, in Philadelphia, and confidential associate of Stephen Girard, died at midnight of Saturday, at his home in that city. He had attained a remarkable age, lacking only four years of a century, and he retained his faculties almost to the last. Death was caused by a gradual wearing out of the vital powers. Professor Wagner was a well-known figure in Philadelphia life, and of wide repute both in this country and abroad. His father was a well-known merchant of Philadelphia. The son just deceased was born at the latter house. He had two brothers, Tobias and Samuel. William and Tobias were apprenticed at an early age to Stephen Girard, and the former was employed for many years in Girard's counting-room. When he attained his majority he was sent on several voyages in charge of Mr. Girard's vessels, and made trips to Borneo and Java. Soon after this he went into business for himself, being engaged in the naval stores trade. He also established extensive mills near Wilmington, N. C. Later he was engaged in coal mining in the interior of Pennsylvania.

In 1835 he retired from business, having amassed a fortune in the neighborhood of \$500,000. About this time he married a \$500,000. About this time he married a Miss Louisa Binney, the daughter of Archibald Binney, of the firm of Binney & Rowlanson, type founders. He met his wife in Maryland while on one of his numerous trips undertaken for the collection of minerals. About this time he turned his attention al most wholly to scientific subjects, and took great delight in pursuing studies of this kind. Probably this bent of mind was due to his associations with Stephen. He became impressed with the idea of establishing a scientific school, and his first step in this direction was taken shortly after his marrage. He purchased the large lot at Seventeenth street and Montgomery Avenue, for which he gave \$7000 This property is now worth \$200,000. On this he erected a small museum where he collected cientific curiosites and lectured on minerscientific curiostes and lectured on miner-alogy, geology and conchology. The lectures were very popular and the building was soon too small to accommodate the audiences. In 1860 he made an unsuccessful effort to

In 1860 he made an unsuccessful effort to buy Spring Garden Hall, at Thirteenth and Spring Garden streets, and finally erected the present museum building at Seventeenth street and Montgomery avenue, a large-rectangular building, completed and dedicated to science in 1864. Here nightly lectures have been given during six months of the year, on various scientific subjects, and the collection of specimens has steadily grown. The collection of minerals and anatomical The collection of minerals and anatomical The collection of minerals and anatomical specimens is especially fine. It includes some exceedingly handsome amethysts. The collection of physical apparatus is extensive and historic in character. Professor Wagner was wrapped up in his work, but was possessed of many rare social qualities and furnished with a rare fund of anecdots. and furnished with a rare fund of anecdote. and turnished with a rare rund of anecote. He was president of the institute. The trustees are Samuel Wagner, his nephew, Robert Cornelius, Joseph Wilcox, Dr T. K. Eskridge and others. By his will all his property is left in trust to the institute.

### DELAPLAINE M'DANIEL

We have to record the death of Delaplaine We have to record the death of Delaplane McDaniel, senior member of the old firm of McDaniel & Harvey Company, of Philadelphia, everywhere known in the metal trade. Mr. Mc Daniel was among the first to introduce galvanized iron in the United States, and the firm with which he has been identified at least 30 years has always maintained. fied at least 30 years has always maintained a foremost position in the trade. Their works in Delaware are extensive, comprising a valuable plant. Mr. McDaniel has been in declining health for several months, apdrclining health for several months, apparently suffering from diabetes or some kindred disease, so that, although naturally inclining to corpulency, his weight when in this city a few weeks ago was reduced to less than 100 pounds. His death occurred yesterday morning, at the age of 67. Highly esteemed, widely useful, and actuated by the highest sense of probity in all his transactions, his his death will be sincerely lamented. Few citizens in mercantile life among those who survive will leave a more honorable record. survive will leave a more honorable record.

Shipbuilding in Great Britain.-The British Trade Journal says: Shipbuilding has as yet received but little stimulus from the Government decision to build new vessels. Reports from Glasgow, Newcastle and other centers indicate a considerable falling off in the tonnage built during 1884, but at off in the tonnage built during 1884, but at Liverpool it is about 2000 tons in excess. Here, however, the prospect for the coming year is by no means any brighter. At Newcastle-on-Tyne, on the contrary, there are at length some prospects of an improvement in business, several orders having been recently received, and a new yard at Pelaw Main which here in state of idlences. Main, which has been in a state of idleness since the commencement of the depression, is about to enter upon active work. Wages in the shipbuilding yards are lower than

Valve Patent Suits Decided .- At Washington, on the 19th inst., a decision was ren-dered by the Supreme Court of the United States in the two patent cases of the Consolidated Safety Valve Company, of Hartford, Conn., appellant, against the Crosby Steam Gauge and Valve Company appeals from the Circuit Court of the United States for the District of Massachusetts. rail sections may be compared, so far as is possible outside of actual practice. The second catalogue, which is descriptive of switches, frogs, crossings, signal appliances and the various other safety appliances and the various other safety appliances in manufactured by this company, is very prolusely illustrated, and contains complete and will descriptions of the above mentioned and illustrated in the court of the show mentioned and illustrated in the court of the show mentioned and illustrated in the court of the show mentioned and illustrated in the court of the show mentioned and illustrated in the court of the show mentioned and illustrated in the court of the show mentioned and illustrated in the court of the show mentioned and illustrated in the court of the show mentioned and illustrated in the court of the show mentioned and illustrated in the court of the show in ardson on September 25, 1866, and January
19, 1869, for certain improvements in
safety-valves. The defense set up by the
Crosby Company was want of novelty in
Richardson's alleged inventions. The court

the Consolidated Company's bills of com-plaint, on the ground that Richardson's patents were invalid. This court reverses that decision, and holds that Richardson's inven-tions had not been anticipated by others, and that he was "the first person who had made a safety-valve which, while it automatically relieved the pressure of steam in the boiler, did not in effecting that result reduce the pressure to such an extent as to make the use of the relieving apparatus practically impossible, because of the expenditure of time and fuel necessary to bring up the steam against the proper working standard." His patents are held by this court to be valid, the valves made by the Crosby Company are declared to be infringements, and the decrees of the Circuit Court are reversed, with directions to award an account of profits and damages on the pat-ent, whose term has expired since this suit began, and to award a perpetual injunction on the other patent. Opinion by Justice on the oth Blatchford.

### NEW PUBLICATIONS.

Cours D'Exploitation des Mines. By Haton de La Goupillère. Volume II. Size, 10 x 6½ inches, 889 pages. Published by Dunod, Paris.

The first volume of this valuable work which was noticed in our issue of March 6, 1884, dealt more particularly with the opening of mines, extraction of ore and under ground haulage. The second volume, which we have just received, is a continuation of the former work, and describes the hoisting of ores from the mine, the methods of freeof ores from the mine, the methods of freeing mines of water, and the systems of ventilation. The present volume comprises the
sixth, seventh, eighth, ninth and tenth parts,
covering the following subjects: Hoisting,
draining, ventilation, miscellaneous, and the
dressing of ores. Each part is divided into
a number of chapters, which are subdivided
into sections, by which means the various
systems and methods described are very
conveniently classified. Under the heading
of miscellaneous the different systems of of miscellaneous the different systems of lighting mines, and the apparatus and appliances used for that purpose, are discussed at considerable length. The subject of ore dressing, with which the volume closes, is very fully treated, over 200 pages being devoted to it alone. The book, which is bound in paper, is printed in a very excellent manner, and is very fully illustrated, the superior execution of the engravings deserving special mention.

Bloodshed Feared in the Hocking Valley.—The weakness of the Ohio State Government is likely to lead to serious results, if recent advices from the Hocking Valley are to be given full credit. It is said that the most active preparations for war are going on among the lawless element, with scarcely any attempt at concealment. Within the past 10 days over 2000 repeating rifles and more than 40,000 rounds of fixed ammunition, bought with the money that charitable people contributed to relieve the destitution of the miners' wives and children, destitution of the miners' wives and children, have been shipped into the valley and distributed. Company organizations have been openly formed and battalion drills are announced to take place. A recent press telegram says: "There are good reasons for believing that the worst communistic leaders of New York, Chicago and other cities are in the Hocking Valley superintending the preparations for war, and the uprising is probably intended to be more far-reaching than the most apprehensive even yet suspect. If surface indications go for anything, and If surface indications go for anything, and unless there is a sudden change in the Hock ing Valley, it may safely be predicted that the people of the whole country will one of these mornings be shocked with the details of battles fought between the State troops of Ohio and a drilled and well-equipped army of law-breakers." The Governor of army of law-breakers." The Governor of Ohio is now preparing to meet the emer-gency, but it is patent to all that vigorous measures a few months ago would have averted the danger of such a catastrophe as now foreshadowed.

Mexican West Coast Trade.-Trade with the west coast of Mexico has been made available to American manufacturers made available to American manufacturers from February I by a contract signed on the 14th inst., at the City of Mexico, by the attorney of the Atchison, Topeka and Santa Fé Railroad and the Mexican Minister of the Interior. From the port of Guaymas, the Gulf terminus of the Sonora Railroad, the company will be allowed to run a steamer company will be allowed to run under the American flag to all Gulf of Cali-fornia ports, carrying the Mexican and American mails. The trade has heretofore been restricted to vessels sailing at irregular intervals, flying the Mexican flag. The company's vessels will run through to San Francisco only three months, but will make regular connections each trip with the Pacific Mail steamers at Acapulco for San Fran-

Recent Foreign News .- The British Admiralty has invited tenders of the ship-builders at Belfast for the immediate con-struction of six cruisers. An association called the Transatlantic Commercial Society has been formed in Hamburg with a capital of 2,500,000 marks. The Deutsche Bank of Berlin has purchased \$1,400,000 worth of the second mortgage bonds of the Northern Pacific Railroad. A company styling itself the British Congo Company has been formed in London. The capital is fixed at \$2,500,-000. Messrs. Jacob Bright, Houldsworth and other members of the House of Comnons are among the directors.

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trate the laps or joints, as it will dissolve the cement and cause the laps to come

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New York Safety Steam Power Co., New York.

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Yours very truly,

(Signed)

(Signed)
BRUSH-SWAN ELECTRIC LIGHT CO.,
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Horizontal Automatic Cut-Off Engines, 25 to 200 H .- P.

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Yours very truly, CHAS. E. EMERY, Eng'r and Supt.

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### New Rope Factory in China.

Messrs. Wilson & Roake, manufacturers of machinery, Front and Dover streets, New York, have recently erected a rope factory at Hong Kong for the Hong Kong Rope Mfg Co, Limited. Mr. J. H. Wilson, of the above firm, went to China to superintend in person the erection of the machinery and the starting of the works, which are now in successful operation, having turned out their first coil of rope on November 26. The works are under the superintendence of Mr. J. M. Scudder, who formerly held a similar position in this country. The factory building, which consists of one continuous ground-floor compartment, with engine and boiler rooms attached, is a substantial brick and stone structure, 200 feet long by 100 feet wide, independently of the engine and boiler rooms. The light and ventilation through-out are excellent, and extra precautions have been taken to guard against fire. The ma-chinery comprises one horizontal tubular boiler constructed by the Hong Kong and Whampoa Dock Company from drawings furnished by Messrs. Wilson & Roake; a Corliss automatic cut-off engine of 100 horse power, built by the firm, and numerous ma chines of various kinds for use in the differ-ent processes of rope manufacture. The power which drives the machinery is transmitted by a 20-inch belt, 90 feet in length from the main driving wheel of the engine from the main driving-wheel of the engine, 12 feet in diameter, to a 5-foot pulley on the first line of shafting, the second line of shafting being driven by a 15-inch belt, 106 feet long. The two main lines of shafting are 400 feet in length, 3 inches in diameter, and revolve at a speed of 187 revolutions per minute. Seven thousand four hundred feet of belting are required to drive the me. feet of belting are required to drive the ma-chinery in the factory. The whole of the machinery is of the most modern type, and embraces all the latest patents and improve

There are three stages in the process of manufacturing the rope, for which there are three distinct departments—the preparing, the spinning and the "laying" or rope-making departments—each of which has its set of machinery. The first two are situated at the western end of the factory, one on at the western end of the factory, one on either side, and the other at the eastern end, on both sides, a clear space running through the center of the building. The bales of hemp are received at the west end of the factory, where they are opened and the hemp oiled. It is then passed through a series of preparing machines, the object of which is to hackle the hemp and straighten which is to hackle the hemp and straighten the fibers, forming it into what is technically known as a "silver." This is then taken to the spinning department, where it is converted into yarn in the spinning-jennys and wound on bobbins. There is a double row, 125 feet long, of spinning-jennys in the factory. The bobbins are next conveyed to the tory. The bobbins are next conveyed to the third or rope-making department, where the yarn is operated upon in the various machines and formed into strands, these afterward being "layed" into rope of the required thickness. The rope is then taken from the machines, reeled off into coils and delivered, ready for the market, at the opposition of the fortest whether the statement of the content o site end of the factory to that at which the hemp was originally received. The ma-chinery is capable of making rope from ¼ inch to 10 inches in circumference. When working to its full capacity the factory will turn out 10 tons of rope per day, and provision has been made for doubling the production should the demand at any time render such a step advisable. With regard to native labor, the company were fortunate enough to secure the services of a number of skilled Chinese workmen from a rope manufactory in San Francisco, and, in consequence, the starting of the factory turned out a much easier task than was at first anticipated.

### Electro-Dynamics.

The January number of Mechanics has

The January number of Mechanics has another communication on the above subject from Mr. John W. Nystrom, of Philadelphia, which we give below:

Although it is not expected that our well-established unit "horse-power" will be disturbed by the proposition of Mr. W. H. Preece, F.R.S., it is proper to consider what the effect of such a change would be. Mr. Preece proposes to increase the unit horse-power from 33,000 to 44,233 foot-pounds per minute, in order to accommodate the abnormous C. G. S., or Centimeter Gram System.

In a paper read before the British Asso ciation at Montreal by Mr. Preece, the following table of units compared with C. G. S. was given :

was given:

Horse-power, 33,000 foot-pounds per minute.
Horse-power, 530 foot-pounds per second.
Horse-power, 75,9 kilogrammeters per second.
Horse-power, 76,9 kilogrammeters per second.
Horse-power, 746, 107 ergs per second.
Horse-power, 746 v. 107 ergs per second.
Horse-power, 746 Watts.
Force de cheval, 75 kilogrammeters per second.
Force de cheval, 75 kilogrammeters per second.
Force de cheval, 736 Watts.
Force de cheval, 366 Watts.
Watt, 0.003405 horse-power.
Watt, 0.003405 horse-power.
Watt, 0.028 kilogrammeter per second.
Watt, 0.735 foot-pound per second.
Watt, 0.735 foot-pound per second.
Watt, 0.735 foot-pound per second.
Metric horse-power, 1.34 horse-power.
B. of T. unit, 1000 Watts per hour.
It will be observed by inspection of the above table that there is no regular system

above table that there is no regular system about it, but it is full of incongruous numbers, even within the C. G. S., and it is therefore unsuitable for practice, and a ret rograde movement in metrology which ought not to be tolerated in our day's state

There is one important consideration con-There is one important consideration connected with the above table which has been neglected by Mr. Preece, namely, that the data given therein will hold good only in such localities where the acceleratrix of

changing of the horse-power as proposed by Mr. Preece would only be an anomaly with out utility, because the C. G. S. does no conform with the metric system nor with any other established system in the world.

Mr. Preece has repeated several times in his lectures that "I cannot help thinking that the good work of the B. A. committee will not be complete until the C. G. S. system is authoritatively applied to work and power." The intention of the B. A. committee is no doubt a good one, but, unfortunately, that committee has in this exceptional case got on a wrong track, for if the C. G. S. should take root it will grow as a weed in the field

The British Association is organized for the noble purpose of advancement of science, in which field of labor wonders have been accomplished to the benefit and progress of mankind, and that Association has now an excellent opportunity of making a further advancement of science by withdrawing the C. G. S.

### Barb-Wire Fence Destroyers.

The following Associated Press dispatch will be perused with interest by such of our readers as are interested in the manufacture r sale of barb wire:
LAS VEGAS, NEW MEXICO, January 14.-

Fence-cutting is going on in Colfax County at a most destructive rate under a strong organization. An almost unbroken line of wire from the Ponie to the Toguisguite, 90 miles, has been cut. The heaviest sufferers are: The Red River Cattle Company, 4 miles; Col. J.
S. Tavlor, 20 miles; W. Miles, 4 miles; J.
W. Keller. 6 miles; Francis Clutten, 15
miles; J. G. Duncan, 5 miles. The work on
the fences of the Dubuque Cattle Company began last night, and they will lose 10 miles of wire. The cutters are not known. Should their identity be established there would be a bloody war, greater in fatality than the famous county war, years ago. Some of the sufferers, particularly M. M. Chase, manager of the Red River Company, are very much worked up over the breaks made by the wire-fiends, and threaten to put armed men along fiends, and threaten to put armed men along their fences and protect their pastures at all hazard. The work of the fence-cutters was as systematic as the workings of a metropolitan police force. Each man was mounted, and they were placed in squads of convenient numbers. The squads would ride up to the fences, a man would drop out at a corner and cut for the extent of ½ mile or more, up to where another fellow had begun work, then jump into the saddle and rush to the head of the line again, after the style of school boys playing leap-frog. They cut the panels in the middle, leaving not one the panels in the middle, leaving not one solid panel along the entire line of devastation. This is done because heavy cattle owners fence more ground than their deeds call for. In so doing they keep cattle on call for. the public domain from getting at the water, for the want of which they drift against the fences and die from thirst. Three hundred and fifteen head of cattle died along Colonel and fifteen head of cattle died along Colonel Taylor's fences last spring, which goes to show the evil of barbed wire in endless lengths. Senator Dorsey, who owns 60 miles square of fenced lands at Palo Blanco, addressed the cutters at Springer yesterday, and said to them that if they would inform him when they got ready to begin operations on his wire he would take it down voluntarily and real it up, thus aying tons of barb tarily and reel it up, thus saving tons of barb wire that would otherwise go to waste. They said they would give him notice in time to save trouble.

Working Old Steel Rails -The Regis ter, of Ironton, Ohio, says in a recent issue:
"We alluded last week to the Iron and Steel
Mill experimenting upon the reduction of
steel rails to billets, by a new process. Heretofore it has been impossible to convert a rail into a billet without maintaining splits and crevices in the billet, which would, of course, reappear at every stage in succeed ing manufacture from a tire to a wire. This was a fatal imperfection. Some parties in Ironton are the assignees of a patent obtained in England for special rolls to conduct this transformation and at the same time prevent the recurrence of the split in the rail. The experiments at the Iron and Steel Mill succeeded admirably. Their billet is sound and solid, and horseshoes, tires, nails, rods, &c., made from it are perfect. They have at the mill numerous articles into which the old steel rail has been transformed, and many samples of their billets and manufac-tured steel have been sent to consumers for inspection and trial.

Our Precious Metals.—Vice-President and General Manager John J. Valentine, of Wells, Fargo & Co., has prepared the annual statement of precious metals produced in the States and Territories west of the Missouri River (including British Columbia and receives by express from the west-const.) receipts by express from the west-coast States of Mexico). It shows aggregate prod-ucts for 1884 as follows: Gold, \$26,256,542; ucts for 1884 as follows: Gold, \$26,256,542; silver, \$45,799,c69; copper, \$6,086,252; lead, \$6,834,091; total gross result, \$84,-975,954. California shows a decrease in gold of \$944,703, and an increase in silver of \$513,597. In Nevada, the Comstock shows an increase of \$1,668,524; Eureka district shows a decrease of \$123,152. In the total product of the Scatterian section sectio shows a decrease of \$123,152. In the total product of the State there is an increase of \$117,318; Montana shows a considerable increase; Colorado and Arizona a decrease from the production of 1883. The exports of silver during the year to Japan, Chica, the Straits, &c, have been as follows: From London, \$40,221,658; from Marseilles, \$1,-361,250; from Venice, \$130,680; from San Francisco, \$13,903,990; total, \$55,617,578.

A Slight Concession on Coal.-The owners of blast furnaces on the line of the Philadelphia and Reading Railroad Company such localities where the acceleratrix of gravity is 9.81 meters per second; but as the acceleratrix varies with the latitude and hight above the level of the sea, his table will not hold good without correction for gravity; and if we are to accept that table as constants all over the world, then the constancy of the dyne-force is thrown overboard, and Mr. Precee's statement that "C. G. S. is a system of absolute measure."

Philadelphia and Reading Raifroad Company and its branches, who recently appealed to the company for some concession to them in the price of anthracite, have received an answer. They are made a total concession of 25 cents per ton, which is divided between the Raifroad Company and the Coal and Iron Company. The former takes 5 cents off the tolls, and the latter 20 cents off the price of the coal. The pig-iron manufacturers declare G. S. is a system of absolute measurement" will not be correct.

Whether or not the metric system is dates from January 1.

Whether or not the English speaking nations, the dates from January 1.

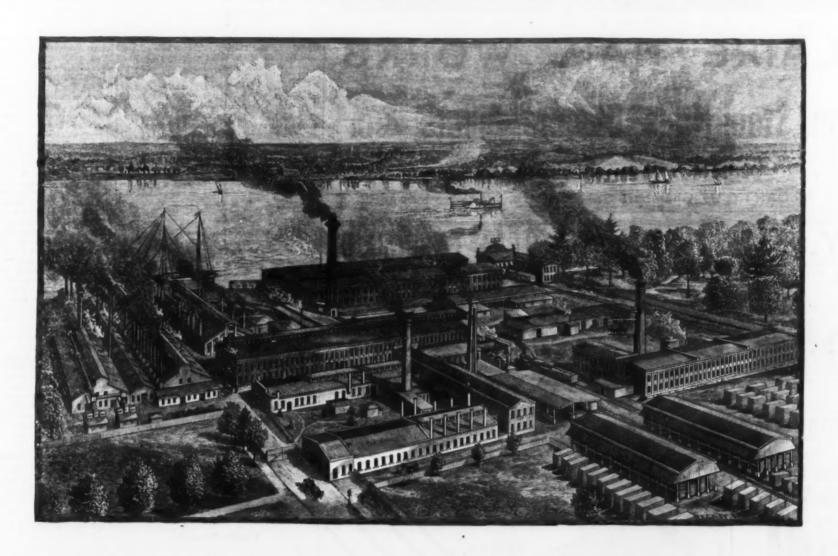
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Franklin	Institute,	Pa		1874,	Silver.
Centennia	l, Philade	lphia .		1876,	Bronze.
New Sou	th Wales			1877,	Bronze.
Paris, Fra	ance			1878,	Gold.
Paris. Fra	ance			1878.	Bronze.

Sydney, New South Wales1879,	Buongo
Melbourne, Australia1880-81,	Silver.
Matanzas, Cuba 1881,	Gold.
Altona, Germany 1881,	Gold.
Altona, Germany 1881,	Silver.
Atlanta, Georgia1881,	Gold.
Louisville, Kentucky1883,	Bronze.
Louisville, Kentucky	Bronze.

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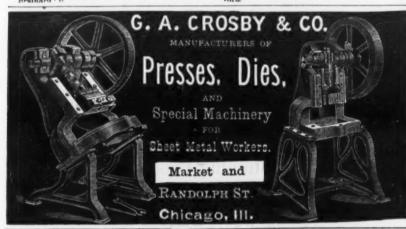
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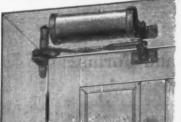


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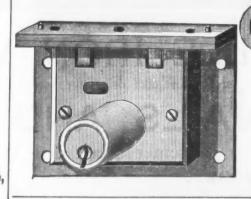


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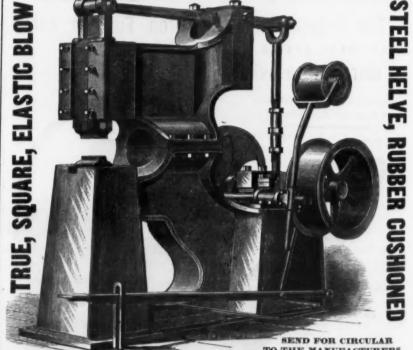
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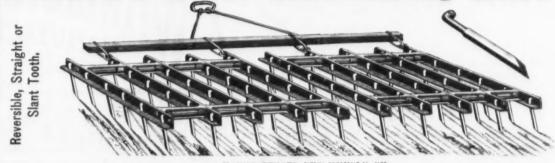
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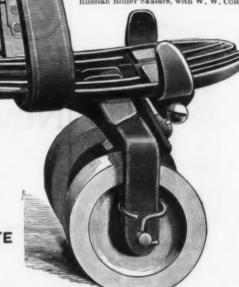
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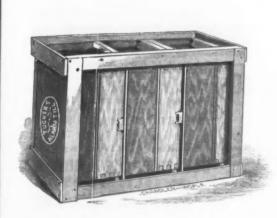
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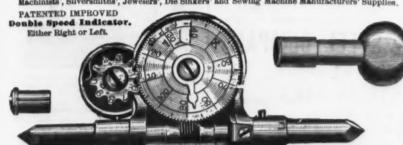


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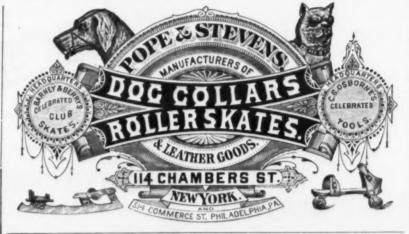
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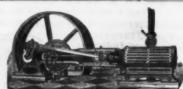
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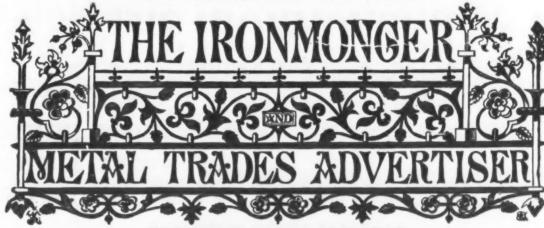
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And Furnace Blocks DRAIN PIPE AND LAND TILE, Woodbridge, - N. J.

# BORGNER & O'BRIEN,

AND

Edge Pressed Furnace Blocks, CLAY RETORTS, TILES, &c., Twenty-third Street, PHILADELPHIA

Twenty years' practical Experience.

WOODBRIDGE CLAY MINING & REFIN'G CO. Woodbridge, N. J. Spa Spring Station, P. R. R. N. J MANUFACTURERS OF

### FIRE BRICK.

S. G. PHILLIPS, Pres., WM. H. LIVINGOOD, Sec. & Treas. Woodbridge, N. J. Reading, Pa.

WATSON FIRE BRICK CO. Established 1836.

to JOHN R. WATSON, Porth Amboy, New Jersey, Manufacturers of

# FIRE BRICK,

FOR ROLLING MILLS, BLAST FURNACES, FOUN-DRIES, GAS WORKS, LIME KILNS, TANNERIES, BOILER and GRATE SETTING, GLASS WORKS, &c Fire Clays, Fire Sand and Knolin for Sale.

ESTABLISHED 1848. TROY FIRE BRICK WORKS, Troy, N. Y. James Ostrander & Son,

FIRE BRICK, s. Blast Furnace Blocks, &c., and in a Specia artment Linings for S'oves, Ranges and Healerso erior quality. Miners of and dealers in Wood ge, N. J., Fire Clay and Fire Sand and Btater of Kaolib.

### ESTABLISHED 1864. JAMES GARDNER.

MANUFACTURER OF

STANDARD SAVAGE" FIRE BRICK, TILE & FURNACE BLOCKS,

OF ALL SHAPES AND SIZES OF ALL SHAPES AND SIZES
Miner and Shipper of "Mount Savage" Fire Clay.
WORKS, Ellerslie, Allegheny Co., Md.
MAIN OFFICE, Cumberland, Md., P. O. Box 93,
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S. M. Hamilton & Co., Agents, Baltimere, Md.

UNION MINING COMPANY. Mount Savage Fire Brick.

EDWARD J. ETTING, Agent, 992 South Third St., Philadelphia, Pa.

XCELSIOR AND CLIPPER LAWN MOWERS HAND CUARANTEED BEST & CHEAPEST **MOWERS** LARGE REDUCTION HORSE MOWERS IN PRICE CHADBORN & COLDWELL MANUF'O CO. NEWBURGH, N. Y.

Self-Binders' for The Iron Age.



We are now prepared to supply our sub-scribers with an excellent self-binder for their papers, a cut of which is annexed. We call attention to the low prices at which it is offered. Address all orders to DAVID WILLIAMS,

83 Reade Street, New York.

NEW ENGLAND BUTT COMPANY,

# Drilled Cast Butt Hinges,

"CHINÉSÉ" LAUNDRY IRONS, SAD IRONS, &c.

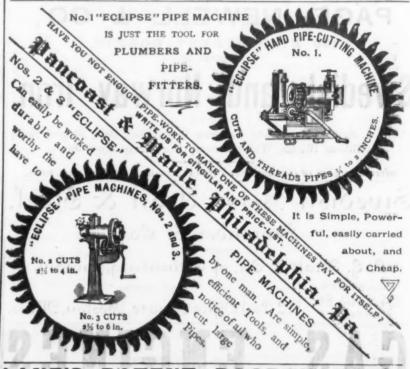


These "Chinese" Laundry Irons are of superior quality; made from the best pig iron, highly finished, and rounded on edges, having Wrought-Iron Handles, with neatly molded Tops of Cast Iron.

The Three Sizes, Nos. 1, 2 and 3, correspond in weight with 4, 5 and 7 lb. Sad Irons.

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### ANE'S PATENT DOOR HANGER. ST PERFECT ANTI-FRICTION HANGER IN THE MARKET, BECAUSE

Wrought Iron. except the Wheel, which has a Steel Axle.



It will not break.
It is practically free from wear.
It is almost noiseless in action.
It requires no oil.
It has a broad bearing on the door, and keeps in ine.
It is by far the most d'rable.
It may be used with any track.
It is always in order.

LANE'S PATENT TRACK

LANE BROS POUGHKEEPSIE



JOHN H. GRAHAM & CO. General Agents. 113 Chambers Street, NEW YORK.



N. Y.

### CAST TEA KETTLES.

PATENT OR FLAT BOTTOM.

JAPANNED OR GALVANIZED.

Pat. Bottom have SAFETY FRONT.

# Chemung Hollow

BARNES' Patent Foot and Steam Power

ELMIRA

MACHINERY.



Complete cutfits for Actual Workshop Business. Lathes for Wood or Metal. Circular Saws, Scroll Saws, Formers, Mortisers, Tenoners, &c., &c., Machines on trial if desired. Descriptive Cata-logue and Price List Free. W. F. & JOHN BARNES, Rockford, Ill.



Ment (
Dixon
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PHILADELPHIA.
Lloyd & Supplee Bardware Co.
leim , 30 days. For 60 or 90 days, interest added at 8 per cent, per annum.
Anvils.         Peter Wright's. ♥ B
Apple Parers. 5.50 net White slountain. 5.50 Lots of 10 to 25 dozen, special prices.
Axes.     # 7.00       Hunt's Kentucky and Yankee, ₱ doz. net.     # 7.00       Robert Mann. ₱ doz. net.     7.00       Favorite ₱ doz. net.     6 50       Beveled Axes.     add 50¢       Double ₱ Ht Axes. net     \$13.00
Augers and Auger Bits.—New List, January 7, 1880.
Snell's Augers and Rits.
Bells. Bevin Bros. Mfg. Co. Light Hand Bells. dis. 75@75 &10 %
& 10 %  Swiss Pattern Hand Bells
Bering Machines Upright, without AugersList, \$5.50 dis50&5 Augular. without AugersList, 6.75 dis50&6 S Belts.—Eastern Carriage Bolta, new list, June 10, 1884dis75&15@80 \$
Staniev, Wrought Shutter dis. 50, 10&10 %
Braces.         dis. 40&5 %           Backus         dis. 50&10 %           Spoirord         dis. 50&5 %           American Bali         dis. 55 %
Butte, Cast Fast Joint, Narrow dis.00&10 % Cast Fast Joint, Broad dis.00&10 % Cast Loge, Joint, Narrow dis.70&10 %

Stanley, Wrought Shutter	1
Braces Barber's	1
Backus	1
Sportorddis. 50&5 %	ı
American Ball	1
Buttm Cast Fast Joint, Narrowdis.60&10 %	ı
Cast Fast Joint, Broad	ı
Cast Loose Joint, Narrowdis. 70@70x10 %	î
Cast Loose Joint, Broaddis. 70@70x10 %	ı
Cast Acorn, Loose Pindis. 70 270&10 %	1
Cast Acorn, Japanneddis 70@70&10 %	ı
Cast Mayer's Loose Joint die 70 a 70 x 10 %	1
Cast Mayer's Loose Joint	ł
Wrought Table Hinges and Back Flaps dis. 55&10 @	1
55&10&10 \$	ī
Wrought Narrow Fast dis. 55&&10 @ 55&10&10 %	ſ
Wrought Loose Joint dis. 60&21/4 @ 60&21/4&10 %	1
Blind Butts.	1
Parkerdis. 75&2 %	ı
Clarkdis. 75&10&2 %	ı
Sheparddis. 75 %	ı
Luli & Porterdis. 80&10 %	ı
Huffer'sdis. 50 %	١
CastersBed (new list July 1, 1880)dis 60 %	ł
Plate dis die 40 4	Ł
Plate	ł
dis. 50 @ 55 %	ı
Galvanized Pump # % 6@6%# net	ı
Boat Proof Coll Chain Frontlish	ı
9 5	1
2.10 1/ 5.10 1/ 7.10 1/4	ı
Chisels, Socket Framingdis 70&10 \$	ı
Socket Firmerdis 70&10 %	ı
Butcher's \$5.00@\$5.25 to £ gold	ł
Coffee MillsBox and Side (new list Jan. 1.	Ł
1880das 40 @ 40&10 %	ı
Enterprise	ı
Cutlery,-Walden Pocketnew list net	ı
Pennsylvania Knife Co. new list net	ı
Pennsylvania Knife Co	ı
Goodnow Mfg. Co. and Meriden Cutlery Co., Manu-	ı

Course Dillis. Box and Side (new list Jan. A.	Ł
1880das 40 @ 40&10 %	н
Enterprise dis 20&10 %	ы
Enterprise dis 20&10 % Cutlery,—Walden Pocket. new list net	н
Pennsylvania Knife Conew list net	ы
remayivania knife Co	н
Landers, Frary & Clark, J. Russell & Co., Lamson &	п
Goodnow Mfg. Co. and Meriden Cutlery Co., Manu-	ı.
facturers' prices net.	н
DPR Wing Knives.	ı
Hart Mrg. Co. sdis 70&10 %	D
Adjustable Handiedis 20 %	н
Fry Pans.	ŧ.
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No 6 1 3 3 4 5 6 7 8 Burnished dis. 70@70&5 5 \$\psi\$ dos\$3.00 3.75 4.25 4.75 5.25 6.00 7.00 8.00 0.00	ш
Burnisheddis. 70@70&5 %	Ł
\$\text{\$\psi\$} \text{dos.} \tag{83.00} \text{ 3.75} \text{ 4.25} \text{ 4.75} \text{ 5.25} \text{ 6.00} \text{ 7.00} \text{ 8.00} \text{ 9.00}	Ł
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Files.	ı
Nicholsondis 60 %	ŧ.
Archolson	Ł
Disstondis 60 %	ı.
Butcher	ı
Crown and Arrow	ı
	ı
Eagle-314 in, roll	н
Eagle—51 in. roll	н
Crown 416 in roll each 3.50)	ı.
Crown-6 in. rolleach, 4.00 dts 35 %	Ł
Crown—8 in. rolleach, 6.50)	ı
Crown o In. roll	ı
Geneva Fluterdis 25 %	Ł
Favorite com. Fluter and Sad Iron. F dos., \$10.50 net	Ł
Hammers.	ı
Yerkes & Plumb's, newlist dis 40&5 %	ı
Maydole Hammersdis 15@20 %	ı
Howell A. E. Nail Hammers # doz., net \$3.75	1
Handles.	ı
Disston Loop Handles Cross-Cut 33¢ pair net	Ł
Bownton Loop Handles Cross Cut 334 pair not	н
Boynton Loop Handles Cross-Cut33¢ pair net	I
Hatchets.	ı
Yerkes & Plumb, new listdis 45 %	ı
Huntdis 85 %	ĺ

Clare was a significant of a factor	
Hay and Straw Knives.	m 4 410 00 dl- 10 d
Lightning	# dos., \$18.00 dis. 10 %
Electric	. W dog. 18.00 dis. 30 %
Wadsworth	W dos., net 35&5 %
Wadsworth Walton Straw Knives	# dog., net 17.00
Hinges.	continue and and account
Strap and T	ata 60 10 1089 € 70 €
Horse Nails. Nos. 5 6 7	CO O 36
Horse Nalls. Nos. 0 0 7	20 40 40 AL 300505 d
Globe26 23 21	10 19 18 dis 10%0@0 %
Ausable30 27 26	94 93 22 dis 25&10 %
Pol'ed and P't'd	
& Blued & P't'd.31 28 26	3 25 24 23 dis 25&10 %
Clinton 23 21	20 19 18 dis 25&10%
" Pol'ed & P't'd. 24 25	
Saranac	
	TO AN AD CLAS NO. N.
Locks and Knobs.	BU 5.0 4
Branford Locks	
Gaylord Cabinet	dis 4042 %
Parker's Cabinet	
American Padlocks	dis 70%2 % cash
Scandinavian Padlocks	dis 50 £
@ dos\$5.00 5.50 6.50 7.50 8	150 10.00 12.50 )
No 57 58 59 60	61 69 69 dis 00 %
P dos\$18.00	26.00 33.00 / 41- 60 4
# dos	98.00 33.00 dia 60 %
No 64	(io 00 )
Lanterns.	
Buckeyelarge	list, net; small list, net
Tubular	: No. 1, \$9.00 F dos. net
Guards, 40¢ extra.	
Lawn MowersPennsylva	nia)
Phthe delighte	
Philadelphia	40年10年3年
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Continental	AATTERCEPT I

A TOWNER OF	
Lawn an	d Garden Pumps.
Holland I	Patent list, \$5.00, dis 10 %
Mattock	
MILLEGER	Short Cutter new list, 60 %
POTE PUR	Short Cutter
	ania Patterndis 60 %
Molasses	Cintes.
Enterpris	e Mfg. Co.'s Measuring Faucets.dis. 20&10 %
Stehhing	Gatesdis. 70&10&2 &
Lingalnia	Gatesdis. 70&10 %
Vincom a	Frary & Clark's Petroleumdis 40&5
Landers,	Francis Chark's Petroleum
BLUMB ITTO	uor Cocks new list Jan. 1, 1880dis. 60 %
Cork Line	ed Cocksdis. 70 %
Meat Cat	iters.
Dixon's.	dia. 40 %
Woodend	dia. 40 %
Storme	dis, 40 %
Malak	new list, dis. 60, 10&2 cash
Hare, B	
American	dis
Stuffers	dis. 40 g

NOT THE REPORT OF THE PARTY OF	
Enterprise Stuffersdis. 26 9	í
Planes Sandusky Tool Codls 2022	٤
Ogontsdis. 20&2 9	ï
Ohio and Auburndis. 20&2	ķ
Bailey (S. R. & L. Co.)dts. 20&10 9	ĕ
Plane Irons, -Ohio Tool Codis. 20&10 4	ï
Butcher's	5
Plumbs and Levels.	٠.
Tiumbs Blid Levels.	
Stanley's Adjustabledis. 65&10&10 \$	
Stanley's Non-Adjustable dis. 65&10&10	
Picks.—New list	Б.
Razor Strops.	
Lamont Combination F dog. \$4.00	,
Lamont Combination 1 gross lots \$42.00	)
Imitation Emerson # dog. \$2.00	)
Lamoille, 1 doz, lots	
" 1 gro. "	
Rules. Stanley Boxwood dis. 75&10&10 %	Ċ
Stanley Ivorydis. 55 %	
Steelyards, -Hart's Pattern	ř.
Per doz\$14.50 17.75 21.00 26.50 31.00 35.50	ì.
Per doz\$14.00 17.75 21.00 20.00 51.00 60.00	,
Lbs 50 100 180 200 250 300	
American Patterndis. 40 5	1
Per dog\$8.00 10.25 13.75 15.60 16.75 19.50	7
Lbs 50 100 150 200 250 300	
Scale Beams 55960 €	

Scale Beams	10U %
Custers	.25 %
quares.	
Steel and Iron.dis. 50; full casedis. 60 for	cash
Try Squares, Stanleydis 608	:10 %
Disston's Try Squaresdis	45 %
cythes. Golden Clipper, Damascus Blade, Box	adl
and Sharmoned # dog #0 00	17
Clipper No. 10. Bronned Blade, Boxed and	1
Sharpened	30
Clipper No. 5, Painted Red, Boxed and	1
Sharpened ₩ doz \$8.00	1
awa, - Disaton's Hand, Panel and Ripdis 204	10 %
Disston's Circulardis 45&	
Cross-Cut No. 2, Plain Toothdis 45&	
Cross-Cut Patent Toothdis 45&	10 ≤
Cross-Cut Champion Toothdin 454	10 %
havels and tinudes.	
Oliver Ames & Sons, new listdis	20 %
Grimthsdis 50 @ 50	At 10
Rowlanddis 50 @ 50	M:10
ad Irons,-4 to 10 h # h 2.70 @:	2.75

wa. Disaton's Hand, Panel and Ripdls 20&10 %	12 16 " "
isston's Circulardis 45&10 %	16 " "
Cross-Cut No. 2, Plain Toothdis 45&10 %	Splice Joints for 12
Cross-Cut Patent Toothdls 45&10 g	and 30-b. Rail, 50¢ ea
Cross-Cut Champion Toothdis 45&10 %	316 by 36 and 16 Spiker
awale and Mandag	212 and 8 by 16 "
liver Ames & Sons, new listdis 20 %	314 by 34 and 14 Spikes 214 and 3 by 36 " 214 by 5-16 "
riffithsdis 50 @ 50&10	Flat RailsP
owlanddis 50 @ 50&10	114 to 2 by 14 to 14 incl
d Irons, 4 to 10 b # B 2.70 @2.75	136 by 36 and 7-16 inch
rs. Potts' Patentdis 35 %	134 by 36, 7-16 and 16 is
ue.	-4 -5 10
ashita Extra # 1634#	Juniata Nail Rods
ashita No. 1 P b 14c	Norway Nail Rods
ashita No. 2 P h 10¢	
ashita Slipe B 276	Guard Iron %x%x9-16
ashita Axe	Drag Bars
The Lot Met	Description Dance

Dropper Bars.

Dropper Bars.

Dropper Bars.

Cylinder and Landside Iron.

Dropper Bars.

Plow Beem Iron.

crews.—Parker List.
Flat Head Iroudis 85 %
Flat Head Brassdis 85 %
Round Head Brassdis 83½ %
Round Head Irondis 831/3 %
poons.
Plateddis 50&5&5 %
German Silver
Britannia, Parker's
Tinned dis 10 %
prings.—Torrey
Gem No. 3 small Japanned \$2.00 } die soatog
prings.—Torrey dis 50 % dem No. 3 small Japanned
Con No. 10 w gross net
Other Standard Springsdis 50&10 %
Warner Door Springs, ₩ dos. #2.50dis 40&10 %
Standard Spring Hinger - Single No. 0, & doz. net
Single No. 1 2 doz net
Single No. 1, \$\P\$ doz, net
stocks and Dies dis 10 and 5%
tove Polish. Gem F gross, 14,50, dis 5 %
Dixon
Fire Fly
racksdis 30&10 %
Shoe Nails—4-8, and over, 7¢
Double Pointed Tracks
Praps.
Genuine Oneida—Newhousedis 35 %
lm. Oneida-Newhouse list. First qual dis 60x10 %
Im. Oneida—Newhouse list. First quaidis 60&10 % Inca.—Solid Box. Trenton new listdis 45 @ 50 %
VrenchesAgriculturaldis 75 %
Coes' Genuine
Coes' Mechanics'dis 60&10&3 % Coes' Mechanics,' Mall. Bardis 70&15 %
Vice. Mechanics, Mail. Bar
Bright or Annealed, No. 0 to 18dis 70 %
Bright or Annealed, No. 19 to 28 dia 70 %
Bright or Annealed, No. 19 to 26
Coppered, 0 to 18 dis 65 %
Tinued Broom Wiredis 65 %
Galvanized Barb Wire 71/4
Painted Barb Wire. 634 Galvanized. No. 7 to 18Market List, dis 4734 @ 50 %
Walvanised, No. 7 to 18Market List, dis 47% @ 50 %
Wringers. Peerless No. 216
Peerless No. 2
Universal No. 214 20.00
Universal No. 2% 30.00 dozen lots Universal No. 2 33.00 dozen lots
Novelty No. 2, for common tuba 30.00 f
Excelsior E, for stationary tube 39.00 Excelsior F
Excelsior F 43.50]
DITTORUS
PITTSBURGH.

Merchant Iron. TERMS.—Note or acceptance at 60 days, with current rate of exchange on New York, or a discount of 2 %

cent. for cash, if remitted within 10 days from date invoice.
For fluctuations and discounts on carates see weekly Pittsburgh Trade Reporte following are card rates.
114 to 4 by 96 to 1 sneh
1 to 156
96 to 116 by 5-16 to 75 Inch
314 to 6 by 14 and 5.16 lineh

\$3.75	32 inch by Nos. 11 and 12
r net	114 to 4, Nos. 13, 14 and 15
IL Wee	1¼ to 2, No. 19
8 45 %	112 to 2, No. 20.
85 %	117 to 2, No. 21
/4	117 to 2, No. 22
. 10 %	15-16, 1, and 1½, Nos. 16, 17 and 18
. 30 %	15-16, 1, and 1½, Nos. 19 and 20
585 %	15-16, 1, and 114, No. 21
17.00	15-16, 1, and 114, No. 22.
-	74. Nos. 13, 14 and 15
70 %	36. Nos. 16, 17 and 18
	16. Nos. 19 and 20
5.86 K	14. No. 21
£10 €	% No. 22
****	13-16, Nos. 13, 14 and 15
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8 20 %	13-16, No. 22
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542 %	Nos. 19 and 20
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8 50 €	11-16, Nos. 13, 14 and 15.
-004	11-16 Nos. 16, 17 and 18

6 by ½ to 3-16.
6 by Nos. 11 and 12.
136 by ½ to 3-16.
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9 to 11 m, we set of 6 b	00ps		3.5€
8 m and less than 9 m	. W set of 6	hoops	8.64
Loss than - B. W set	of 6 hoops.		3.84
Extras for Cutting	to Length e	all Preceding	I Iron
All Iron, including Tt	re		1.104
All Mon. microsing an	Trank Iman		
No O and bearies	a consta arone.		9.94
No. 9 and heavier			
Plow Slabs			3.0€
Piow Wings			3.8€
	Sheet Iron.		
	Common.	Charcoal.	Juniata.
Nos. 10 to 14	3.5¢	5.0€	6.54
Nos. 15 to 17	3.8#	5.3#	6.8¢
Nos. 18 to 21	4.10	6.6#	7.1€
Nos. 22 to 24	4.3¢	5.8∉	7.84
Nos. 25 and 26		6.00	7.54
		6.24	7.74
No. 27 No. 28	5.1#	6.64	7.7¢ 8.1¢
All sheets No. 18 as	ad lighter, o	over 30 Inch	es wide.
not less than 2.10¢ ex	ira.	o · o · o · sarca	and to actual
HAS LEAD STRUM WITCH CW	T.E. 100.0		

os. 10 to 14	5.0€	6.54
s. 15 to 173.8¢	5.3#	6.84
ns. 18 to 214.1¢	6.6#	7.14
m, 22 to 244.3€	5.8€	7.84
os. 25 and 26	6.04	7.64
274.76	6.24	7.74
. 28	6.64	8.14
All sheets No. 18 and lighter,	over 30 Inch	es wide
t less than 2.10¢ extra.	0.00 00 1110	
Wood's Putent Plant		
quality (A)10166   2d q	uality (B)	9.04
alvanized C. H. B (Charcoal	Hammered l	glooms.
m. 14 to 20		
m. 21 to 24	28	16¢
s. 25 and 2614¢ No.	29	18¢
714 @ 60 % discount.		
Coal Screen E	ron.	
( by % by 5-16 3.0¢   1 by	% by 5-16	8.54
Angla Iron		
3, 3% and 4 inch		3.34
134, 2° and 234 "		
inch		3.44
44		3.64
by 1 inch. for Plow Handles.		3.84
by to " " "		3.84
by 6 4 4		3.94
T Roll.		
the to the vard 2.9¢   20 II	or, to the yard	2.84
286 28	86 65	2.84
lbs. to the yard2.9¢   20 R	66 60	2.84
plice Joints for 12, 16 and 2	m. Rail. 40d	each: 28
pines some to as, to make we	104 anah	Control & Williams

See Pittsburgh Trade Report. Best Quality Refined Cast Steels.
Square Fi-t, Octagon and Rosand.
1-16 and 234 to 3 lunches.
44 and 344 to 4
47-32 and 444 to 5
3-16 and 654 to 6
5-32 lunches.

Oll Well Steel Forgings.

Machinery Steel. Ordinary Sizes. % to 2 inch

Crucible

Crucible

Open Hearth.

list.
Cut to specified lengths, ½¢ extra.
Hammer Cast Steel.
Crucible Cast Steel.
Open Hearth Cast Steel.
Sheet Steel.—Crucible. Best. 2d Qual. 3d Qual. Open Hearth
16 extra for each additional gauge.
Cut to multiples or specified lengths, 16 extra.

Miscellaneous Cast Steel.

Auger and Auger Bit

ile, subject to Machinery classification. Spindle, subject to Machinery classification 6.
Trap Spring Steel. 7.
Forged Crank Plus and Latee Spindles 8.
Fiston Rods, plain 9.
Fiston Rods, plain 9.
Fiston Rods, forged to shapes. 8.
Slide Bars, plain. 8.
Open liearth or Bessemer
Boller, Fire-Box and Flue Sheets. not less than 3-16.
thick

thick, oller, Fire Box and Flue Sheets, not less than k thick. Irculars and semi-circulars, when ordered sepo

Spiral, Taper, cut to lengths.

Ix's and over.
Ix's 16, 'ax's 16 and 's'
1 and 13-16 x/s and 5-32, 'ax's 16 and 5-32
4 and 's'x and 5-32, 'ax's 16 and 5-32
5 Solid Safe Cast Steel.

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Horse Rake Steel. cut to lengths. Crucible.

Horse Rake Steel cut to lengths. Crucible.

Corn Stalk Cutter, beveled.

Beveled Hoe and Shovel Steel in Blass.

Crucible Plow Steel in Slabs.

Bestener and Upen Hearth.

Spring.

Spring spiral and taper, cut to lengths.

Thre, 3-16 thick and above.

Three Lake.

Plow ...

Axie Billets.

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Sand Rolls and Pinions, small size.
Flower of the straight size of the sand Rolls and Pinions, small size.
Sand Rolls and Pinions, small size.
Falleys up to 30 inches sand Rolls and Bevel Wheels, large.
Spur and Bevel Wheels, large.
Spur and Bevel Wheels, large.
Spur and Revel Wheels, large.
Falleys up to 30 inches.
Engine Castings, light.
Engine Castings, heav.
(\*Killed Rolls.
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8 to 16 in. diam., to 20 in. long.
35 to 45 al. diam., 15 to 72 in. long.
After October 1, 1881, no discounts will settlement, as heretofore, prices quoted

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14 # 5 over keg price; assorted, I to 5 b cans, 35 #

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Inche	Bizes.	AA.	Α.	B.	C.
25	6 x 8 to 10 x 15	88.75	88.00	\$7.50	\$7.00
36	11 x 14 to 16 x 34	9.25	8,50	8.00	7.25
48	16 x 24 to 20 x 28	10.75	9.75	8.75	7.76
26	15 x 84 to 24 x 30	12.25	10.75	9.00	****
00	26 x 28 to 24 x 86	13.00	11.50	9.75	****
70		14.50	13.25	10.75	
80	26 x 46 to 30 x 50	15,00	14.00	11.25	****
84 800	30 x 59 to 30 x 54				
So.	30 x 56 to 34 x 56	0.000		0.000	0000
19th	34 x 58 to 34 x dd	2000	****	****	
w	36 x 60 to 40 x 60	8555	200	****	
-	Double Strength.				
25		13.26	12.25	11.25	10.50
39	11 x 14 to 15 x 24	14.50	13.25	12.50	11.25
55	16 x 24 to 20 x 28	17.25	15.75	14.00	****
か	15 x 34 to 24 x 30	19.75	17.25	14.50	****
OU	26 x 28 to 24 x 36	21.00	18.50	15.75	
70	26 x 36 to 26 x 44	23.25	21.25	17.25	
80	26 x 46 to 30 x 50	24.00	22.50	18.00	****
84	30 x 52 to 30 x 54	25.75	23.25	19.25	
NO.	30 x 56 to 34 x 56	27.75	25.00	21.75	****
IPŘ.	35 x 56 to 34 x 60	29.25	27.75	24.00	****
W.	36 x 60 to 40 x 60	33.25	30.00	27.75	****

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Drain Tools, list.	*********			dis 29
Hoes, Planters'.		*****		dis oc
Hoes, Sowill Pat Hoes, Handled, S	commo Er	Con		dia 50
Handles, Cross C	odume my	c, Gerr	The Park	r dox 98
Handles, Shovel,	Bent. Box	ed. Ri	veted pe	dog. 2.
Sawa Circular.				dia 45
Saws, Long		· exeren		dis 40
Sawa Cross-Chr.	H. B. & C	o., Cna	mpion. De	er root
net		******		
Naws, Cross-Cut.	Lippincot	r. Chai	mpiom, pe	r root
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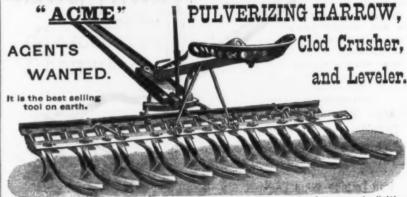
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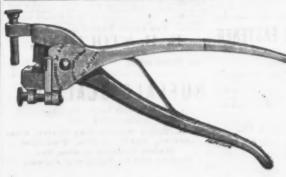
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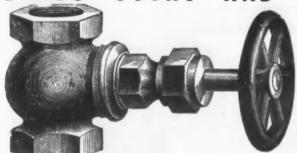
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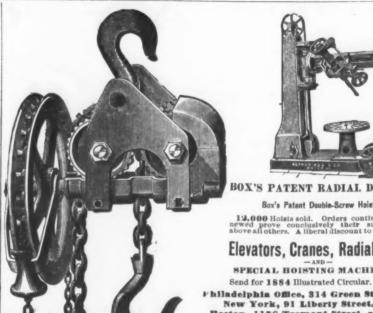
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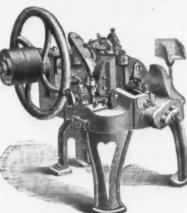
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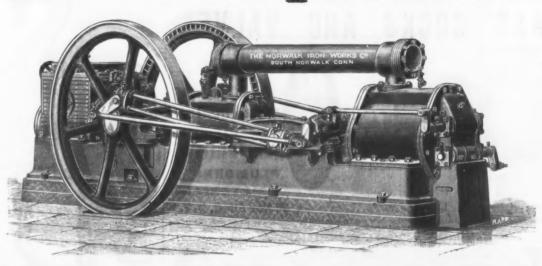
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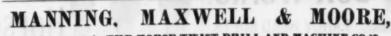
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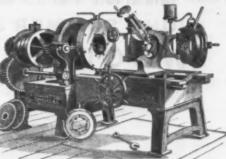


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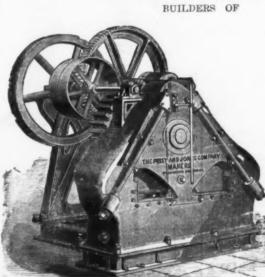
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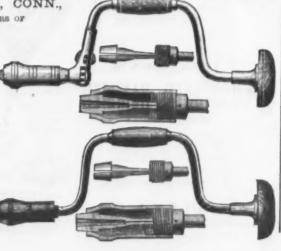
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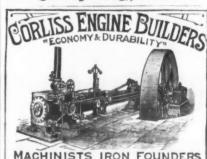
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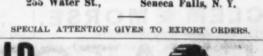
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